



Report of the
Defense Science Board
Task Force on the

Fulfillment of Urgent Operational Needs

July 2009

Office of the Under Secretary of Defense
For Acquisition, Technology, and Logistics
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DEFENSE SCIENCE
BOARD

OFFICE OF THE SECRETARY OF DEFENSE
3140 DEFENSE PENTAGON
WASHINGTON, DC 20301-3140

July 1, 2009

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION,
TECHNOLOGY & LOGISTICS

SUBJECT: Report of the Defense Science Board Task Force on Fulfillment of Urgent Operational Needs

I am pleased to forward the final report of the Defense Science Board Task Force on Fulfillment of Urgent Operational Needs. The report offers important considerations to the Department of Defense (DOD) for meeting warfighter needs.

This report provides an overview of current procedures to generate, validate, and fulfill urgent operational requirements, both through Service and joint processes. It also describes the oversight of the execution, performance, and transition of the need process and addresses the challenges of responding to urgent needs in an effective and efficient way.

The task force found that all of DOD's needs cannot be met by the same acquisition process. Current approaches to implementing rapid responses to urgent needs are not sustainable. An integrated triage approach is required.

The report cites a number of institutional barriers to rapid fielding of proven technologies. To address these concerns, the task force recommends formalizing a dual acquisition path by standing up a new organization and funding stream dedicated to rapid acquisition and fielding. The task force outlines a streamlined, integrated approach to institutionalize their recommendations.

I endorse all of the study's recommendations and encourage you to adopt them into the operations of the Office of Acquisition, Technology and Logistics and to forward the report to the Secretary of Defense.

Brian Hughes
Executive Director



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DEFENSE SCIENCE
BOARD

June 23, 2009

MEMORANDUM TO THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Final Report of the Defense Science Board Task Force on Fulfillment of Urgent Operational Needs

The accelerated pace of change in the tactics, techniques, and procedures used by adversaries of the United States has heightened the need for a rapid response to new threats. Fielding systems in response to urgent operational needs over the past half decade has revealed that DOD lacks the ability to rapidly field new capabilities for the warfighter in a systematic and effective way.

The final report of the Defense Science Board Task Force on Fulfilling Urgent Operational Needs is attached. The task force identified several key elements that can inhibit efficient rapid acquisition and fielding. The primary finding of the task force is that all of DOD's needs cannot be met by the same acquisition processes, and that the degree of urgency and technology readiness can be used to differentiate "rapid" and "deliberate" acquisitions. An integrated triage process is needed to determine the appropriate process, and the task force noted that any rapid response must be based on proven technology. Current approaches to implement rapid responses to urgent needs were found to be unsustainable, and institutional barriers—people, funding, and processes—are powerful inhibitors to successful rapid acquisition and fielding of new capabilities.

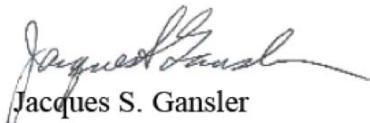
The task force identified a number of critical actions to address the situation:

- Most importantly, the Secretary of Defense should formalize a dual acquisition path that separates "rapid" and "deliberate" acquisitions. A rapid process should be based on proven technology and is aimed at delivering a capability as quickly as two months, and no longer than 24 months after the need is identified. Deliberate processes should be used for more complex needs that require development efforts.
- To implement this separation, the Secretary of Defense should establish a new agency: the *Rapid Acquisition and Fielding Agency (RAFA)*. The task force recommends that this agency should employ a streamlined, integrated approach for rapid acquisition. RAFA should be focused on acquiring new solutions to joint urgent operational needs and should work with the

combatant commands to anticipate future needs. RAFA should also oversee and coordinate tracking of all urgent need statements in conjunction with the Services and components.

- Because urgent operational needs may arise both during wartime and when threats are imminent, executive and legislative branches should establish a separate and flexible fund for rapid acquisition and fielding today. The initial funding and billets for RAFA should be based on absorbing and integrating some of the existing *ad hoc* programs and organizations that are currently addressing urgent operational needs.

I believe that implementing these recommendations is imperative to supplying the warfighter with the capabilities needed for success. Urgent needs remain waiting to be fulfilled today with evermore limited resources while we anticipate new and even more devastating capabilities from adversaries. The men and women of the Armed Forces in harm's way deserve this support.



Jacques S. Gansler
Chairman

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Executive Summary

Today's adversaries are changing their tactics, techniques, and procedures at an accelerated pace, heightening the need for U.S. forces to respond rapidly to new threats. Perhaps the most well-publicized example of such adversarial capabilities is the use of improvised explosive devices in Iraq—a threat that created urgent demands from forces in the field to develop capabilities to counter such attacks. Fielding systems in response to these needs over the past half decade has revealed that the Department of Defense (DOD) lacks the ability to rapidly field new capabilities for the warfighter in a systematic and effective way.

In response to this situation, the Defense Science Board Task Force on the Fulfillment of Urgent Operational Needs was chartered to evaluate:

- the effectiveness of the procedures to generate, validate, and fulfill warfighting requirements through the urgent operational need (UON) and joint urgent operational need (JUON) processes
- the extent to which joint urgent operational needs statements are used to avoid Service-specific urgent operational needs and acquisition processes or to document non-urgent capability
- the extent to which joint acquisition entities maintain oversight, once a military department or defense agency has been designated responsibility for executing and fielding a capability in response to a joint urgent operational need statement.

This oversight includes 1) responsiveness in execution, 2) field performance of the capability delivered, and 3) concurrent development of a long-term acquisition and sustainment strategy.

Over the course of the wars in Iraq and Afghanistan, it became apparent that U.S. forces were not adequately equipped for ongoing stability or counterinsurgency operations. The combatant commands eventually submitted more than 7,000 need statements for urgent solutions through command channels to the Joint Staff and the Services. The Services and the acquisition community scrambled to respond to these needs, standing up more than 20 *ad hoc* offices, agencies, task forces, funds, and other organizations to respond and fulfill these diverse needs. A process for joint urgent operational need statements

was created in 2004 to facilitate effective tracking and fulfillment of joint combatant command needs.

Over the past five years there have been many success stories and lessons learned. The Joint Staff, combatant commands, and the Services have all codified in directives new processes to identify urgent needs and provide rapid responses. However, in the larger picture, the DOD has not made major, institutional changes in its budgeting and acquisition processes essential to posture itself for the ongoing hybrid warfare reality.

The essence of the problem is the need to field militarily useful solutions faster. The reality is that the Department is not geared to acquire and field capabilities in a rapidly shifting threat environment. Current long standing business practices and regulations are poorly suited to these dynamics. Today, the DOD is saddled with processes and oversight built up over decades, and managers leading them who are often rewarded for risk aversion.

The task force recognizes that satisfying an urgent need statement for a specific item or a narrowly specified solution may be a logistics function rather than acquisition. Consequently, a very necessary step is to perform triage on incoming urgent need statements to differentiate between the two. Fulfilling urgent logistics requests is very important, and any urgent response—especially one that involves commercial equipment—should consider doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) in order to trade off short-term benefits and long-term costs. In some cases, triage may reveal that acquisition of a different solution than originally proposed better fits the need, or it may identify the need to acquire a more developmental solution.

Evaluating a true capability gap in an effective and systematic way will also involve operations research and system analysis (ORSA) and analysis of alternatives in addition to DOTMLPF. This ORSA step, during the triage process as well as during solution development, is missing in many current rapid acquisition processes. Addressing urgent need statements that describe a mission need or capability gap rather than a specific solution is critical to mission success.

Findings of the Task Force

All of DOD's needs cannot be met by the same acquisition processes. Desired systems, capabilities, and materiel may have major

variations in urgency, technology maturity, and life cycle considerations. Collectively, these will dictate the appropriate procedures needed for effective acquisition and timely delivery. To facilitate these goals, DOD needs to codify and institutionalize “rapid” acquisition processes and practices that can be tailored to expedite delivery of capabilities that meet urgent warfighter needs.

“Rapid” is countercultural and will be undersupported in traditional organizations. Rapid acquisition often challenges traditional systems, practices, and cultures. The current defense acquisition workforce is rewarded for following complex procedures with accuracy and precision and is punished for bypassing them. Rapid responses necessitate creativity and workarounds that go against these norms. Sustaining an effective “rapid” acquisition capability within DOD will require the active support of the testing, resourcing, and requirements communities. All of these communities must acknowledge that rapid processes to meet urgent needs can function concurrently with the deliberate and more comprehensive acquisition process for systems relying on new technology development.

Any rapid response must be based on proven technology and robust manufacturing processes. Attempting to squeeze new technology development into an urgent timeframe creates risks for delays and ultimately may not adequately address an existing capability gap. While there may be instances in which early fielding of prototypes with contractor logistics support is appropriate, the risks must be well understood and parallel efforts should be in place to mature the technology and to ensure that training and logistics are adequate for the system life cycle. An assessment of capabilities and limitations should be an integral part of the warfighter’s acceptance of the system for operational use.

Current approaches to implement rapid responses to urgent needs are not sustainable. The DOD has done little to adopt urgent needs and rapid acquisition as a critical, ongoing DOD institutional capability essential to addressing future threats. While many *ad hoc* processes are being formalized, these processes do not encompass the breadth or depth needed to ensure rapid response to future challenges. Further they are not being incorporated into Service budgeting processes. The *ad hoc* task forces and programs do not have the impetus or adequate advocacy beyond the war; they will not stand up to long-term budget battles with Service programs of record.

An integrated triage process is needed. A combatant command may identify an urgent need for several different reasons. To be most effective, the solution to this need should not be presumed without a higher level view of all needs and a wider view of potential solutions. Responding to all must involve proven technology and be schedule driven, but because all are different and resources are limited, triage is an important step.

Institutional barriers—people, funding, and processes—are powerful inhibitors to successful rapid acquisition and fielding of new capabilities. For success, these barriers must be addressed with explicit solutions.

Recommendations of the Task Force

RECOMMENDATION 1. THE SECRETARY OF DEFENSE SHOULD FORMALIZE A DUAL ACQUISITION PATH

"Deliberate" and "rapid" acquisition are incompatible processes as currently configured in DOD, and the task force concluded that these would be better handled in separate organizational elements and with separate budgeting guidance. Solutions may start as either rapid or deliberate acquisitions, depending on the urgency as well as on technology availability and maturity. In the proposed process, rapid acquisition would be basically consistent with the DOD 5000 series, but carried out in an integrated and compressed manner. Figure ES-1 depicts the envisioned architecture of this separation.

RECOMMENDATION 2. EXECUTIVE AND LEGISLATIVE BRANCHES MUST ESTABLISH A FUND FOR RAPID ACQUISITION AND FIELDING

To fund incremental contingency costs (for conflicts such as in the Balkans), Congress established the Overseas Contingency Operations Transfer Fund to address stability and reconstruction costs incurred as a result of military operations. A similar approach is proposed to respond to urgent needs from any combatant command as a result of on-going action or an imminent threat.

RECOMMENDATION 3 . THE SECRETARY OF DEFENSE SHOULD ESTABLISH A NEW AGENCY: THE RAPID ACQUISITION AND FIELDING AGENCY

The proposed organizational home for the rapid acquisition path is a new agency within the office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)). The new agency, with a proposed name of the Rapid Acquisition and Fielding Agency (RAFA) will be focused on speed, utilizing existing technologies, and acquisition flexibilities to achieve a 75 percent solution—initially “good enough” to address the urgent needs of the warfighter.

Such an organization is necessarily joint and could be organizationally similar to other defense agencies, including the National Security Agency or the Defense Logistics Agency. It should be headed by a 3-star-level officer who reports directly to USD (AT&L) for high-level support and visibility, and who operates with a dotted line to the Vice Chairman of the Joint Chiefs of Staff. The agency works in partnership with the Services’ acquisition, doctrine, training, and sustainment elements. Ideally, each Service would also establish their own “rapid” acquisition organization within the Service Acquisition Executive’s purview that would work in close collaboration with the RAFA.

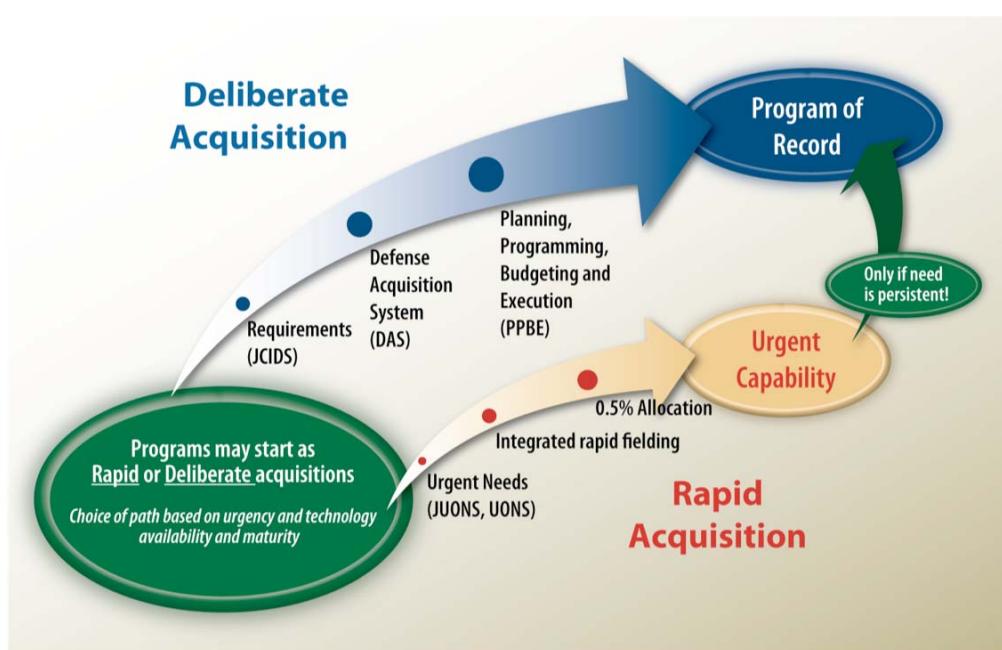


Figure ES-1. A dual acquisition path is envisioned.

RECOMMENDATION 4. INITIAL FUNDING AND BILLETS FOR RAFA WILL BE BASED ON ABSORBING AND INTEGRATING EXISTING PROGRAMS AND ORGANIZATIONS

The task force recommends easing the transition to the new organization by drawing initial billets and budgets from the current *ad hoc* efforts in the Office of the Secretary of Defense.

RECOMMENDATION 5 . DOD SHOULD ESTABLISH A STREAMLINED, INTEGRATED APPROACH FOR RAPID ACQUISITION

In this framework, needs, acquisition, and funding steps are tightly coordinated. Capability needs are generated, certified, and validated quickly, and then acquisition carries out an analysis of alternatives in conjunction with initial analysis of funding needs. Once a solution is identified, is it approved, assigned to an acquisition organization, and funding is applied. Execution is concurrently tracked while DOTMLPF considerations are evaluated and an initial operating capability is approved. Successful completion of these steps leads directly to production and fielding of an initial operating capability and a transition to production or operations and maintenance funding.

Next Steps

It is imperative that the Secretary of Defense, the Joint Chiefs of Staff, and the Service leaders start now to implement all five of these recommendations. Existing urgent needs remain waiting to be fulfilled with ever more limited resources, and the potential for new and even more devastating capabilities from adversaries loom large. The men and women of the Armed Forces in harm's way deserve this support.

Chapter 1. Introduction

Today's adversaries are changing their tactics, techniques, and procedures at an accelerated pace, heightening the need for U.S. forces to respond rapidly to new threats. Perhaps the most well publicized example of such adversarial capabilities is the use of improvised explosive devices (IEDs) in Iraq—a threat that created urgent demands from forces in the field to develop capabilities to counter such attacks. Further, while systems were fielded in response to these needs, the experiences of the past half decade point to the fact that the **Department of Defense (DOD) lacks the ability to rapidly field new capabilities to the warfighter in a systematic and effective way.**

Not surprisingly, reports of delays in fielding capabilities, lack of training and support, and other shortcomings have drawn attention, particularly on Capitol Hill. In June 2007, Senators Joe Biden and Kit Bond, in a letter to Secretary of Defense Gates, stated: "We are concerned that the Department is failing to respond to urgent warfighter requirements because of unconscionable bureaucratic delays in Washington." This and other criticisms from the Congress subsequently led to a congressional request for an independent review of DOD responses to urgent needs submitted by combatant commands (COCOMs).¹

Charter

In response to this request, the Defense Science Board (DSB) Task Force on the Fulfillment of Urgent Operational Needs was chartered in December 2008. The task force was charged to evaluate the following:

- the effectiveness of the procedures to generate, validate, and fulfill warfighting requirements through the urgent operational need and joint urgent operational need processes
- the extent to which joint urgent operational needs statements are used to avoid Service-specific urgent operational needs and acquisition processes or to document non-urgent capability
- the extent to which joint acquisition entities maintain oversight, once a military department or defense agency has been designated responsibility

1. Section 801, 2009 National Defense Authorization Act.

for executing and fielding a capability in response to a joint urgent operational need statement

This oversight includes: 1) responsiveness in execution, 2) field performance of the capability delivered, and 3) concurrent development of a long-term acquisition and sustainment strategy.

In addition, the task force was asked to make recommendations in the following areas:

- best practices and process improvements to ensure that urgent operational needs statements and joint urgent operational needs statements are presented to appropriate authorities for review and validation not later than 60 days after the documents are submitted
- common definitions and standards for urgent operational needs statements and joint urgent operational needs statements
- best practices and process improvements for the creation, evaluation, prioritization, and fulfillment of urgent operational needs statements and joint urgent operational needs statements
- the extent to which rapid acquisition processes should be consolidated or expanded

The Evolving Response to Urgent Needs

Over the course of the wars in Iraq and Afghanistan, it became apparent that U.S. forces were not adequately equipped for ongoing stability or counterinsurgency operations. When enemy elements exploited capability gaps, U.S. forces responded initially by locally changing tactics, techniques, and procedures. At first, because these needs were so urgent, some resourceful units in the field began to purchase equipment locally, such as commercial radios and fabricated armor panels for tactical vehicles, e.g., high mobility multipurpose wheeled vehicles (HMMWVs).

More complex operational needs emerged quickly, including the need for additional equipment (e.g., uparmored vehicles), for new capabilities (e.g., human terrain knowledge), and new tactics to counter IEDs (e.g., communications jammers). Beginning in 2005, various organizations and processes were organized within the Office of the Secretary of Defense (OSD), the Joint Staff, and the Services to respond to “urgent operational need statements.”

The combatant commands eventually submitted more than 7,000 need statements for urgent solutions through command channels to the Joint Staff and the Services. The Services and the acquisition community scrambled to respond to these needs, standing up more than 20 *ad hoc* offices, agencies, task forces, funds, and other organizations to respond and fulfill these diverse needs. A process for joint urgent operational need statements (JUONS) was created in 2004 to facilitate effective tracking and fulfillment of joint combatant command needs.

Over the past five years there have been many success stories and lessons learned. The Joint Staff, COCOMs, and the Services have all codified in directives new processes to identify urgent needs and provide rapid responses. Recent progress includes a detailed urgent needs process memorandum circulated by the Secretary of the Navy in March 2009. The Army Asymmetric Warfare Group has also made significant contributions by identifying and assessing capability gaps, and then rapidly developing solutions to fill these gaps.

However, in the larger picture, the DOD has not made major, institutional changes in budgeting and acquisition essential to posture itself for the ongoing hybrid warfare reality. DOD is not systematically prepared to anticipate and respond to urgent and dynamically changing needs that will be a permanent part of 21st century operations. The global landscape has changed the national security environment, demanding the ability to rapidly access and field capabilities from any source. Agile adversaries are taking advantage of important, globally available technologies by rapidly creating and fielding highly effective weapons. Moreover, the nation faces a vast range of potential contingencies around the world. In many cases, our adversaries' goal is to act politically rather than militarily, and sometimes even a "25 percent solution" achieves this. Finally, the rapid cycle of measure/counter-measure/counter-counter-measure will continue to add complexity to hybrid warfare operations, including cyber warfare.

As a result, it is neither possible to plan for nor to fund for all possibilities. This set of circumstances calls for rapid adaptation on the part of the United States as well—adaptation of tactics, techniques, and procedures as well as the ability to field new capabilities on a timeframe unfamiliar to the bureaucratic processes that dominate acquisition in the Department of Defense today.

The Problem at Hand

The reality is that the Department is not geared to acquire and field capabilities in a rapidly shifting threat environment. Current long-standing business practices and regulations are poorly suited to these dynamics. Today, the DOD is saddled with processes and oversight built up over decades, with managers leading them who are often trained to be risk averse. The “normal acquisition” system is a long chain of demanding, disciplined tasks that take years and only respond by exception to rapid changes: Joint Capabilities Integration and Development System (JCIDS) for requirements, the Planning, Programming, Budgeting, and Execution (PPBE) for funding, and the DOD 5000 series for acquisition. Planning is insufficiently anticipatory. The process is too inward-looking. It does not sufficiently leverage the commercial or global market, nor does it sufficiently leverage the public sector—coordinating with other agencies for solutions to needed capabilities.

In general, DOD acquisition personnel have limited visibility of emerging commercial technologies, fostering an insular nature of DOD acquisition processes. Even within the Department, there is no real acquisition community; instead, the acquisition process is stove-piped with departments and agencies operating within their individual silos, with attention centered on major platforms rather than capabilities—despite the advent of capability-based planning. Further, the stove-piped nature of the community does not well serve the needs of the combatant commanders, organizations that are by definition “joint.”

The essence of the problem at hand is the **need to field militarily useful solutions faster**. As Secretary Gates wrote in *Foreign Affairs* earlier this year, “The Department of Defense’s conventional modernization programs seek a 99 percent solution over a period of years. Stability and counterinsurgency missions require 75 percent solutions over a period of months. The challenge is whether these two different paradigms can be made to coexist in the U.S. military’s mindset and bureaucracy Given the types of situations the United States is likely to face ... it is time to think hard about how to institutionalize the procurement of [critical] capabilities and get them fielded quickly.”²

Criticisms of the DOD acquisition system are not new. It is an arduous and disciplined process that seeks to minimize risks and ensure detailed cost

2. Robert M. Gates. “A Balanced Strategy: Reprogramming the Pentagon for a New Age,” *Foreign Affairs*, January–February 2009.

oversight. It has been studied and modified for decades. In recent years, however, increasing emphasis has been given to the challenges associated with meeting urgent operational needs and, in particular, how ill-suited to that task is the current DOD acquisition processes. For the past several years, numerous studies have examined this problem, all of which have made similar recommendations for change focused on developing the ability for rapid acquisition and fielding of needed equipment. These studies include the following:

- *21st Century Strategic Technology Vectors*, Defense Science Board (2006)
- *Defense Industrial Structure for Transformation*, Defense Science Board (2007-2008)
- *Venture Capital and IT Acquisition: Managing Uncertainty*, MITRE (2008)
- *Institutionalization of Innovative Army Organizations*, Army Science Board (2008)
- *Buying Commercial: Gaining the Cost/Schedule Benefits for Defense Systems*, Defense Science Board (2009)
- *Perspectives on Potential Changes to Department of Defense Acquisition Management Framework*, Government Accountability Office (2009)
- *Creating a DOD Strategic Acquisition Platform*, Defense Science Board (2009)
- *Defense Science Board 2008 Summer Study on Capability Surprise* (forthcoming)

As well, Congress has requested numerous examinations of the DOD acquisition system over the years. Most recently, in addition to this DSB study, the 2009 National Defense Authorization Act calls for assessment of technology transition programs and repeal of reporting requirements (Section 253) and transfer of sections of title 10 in relation to Milestone A and Milestone B, for clarity (Section 813).³

Thus, the imperative to coherently address rapid fielding in the 21st century security environment is widely recognized. The Department lacks a robust, enduring process to identify novel or emergent threats and rapidly devise and field capability solutions. Today's traditional programming and acquisition

3. The task force received briefings on each of these efforts.

processes make it difficult to respond quickly or to access the full range of globally available technology approaches. In today's war fighting environment, acquisition delays do not lead merely to schedule and cost overruns—important though they may be. In hybrid warfare, delays lead to loss of life on the battlefield as soldiers wait for a solution to unanticipated threats. DOD's traditional processes were designed for major system acquisitions with significant technology development. They rely on many business practices and traditional requirements that are outdated and need to be updated to a 21st century model. They are focused on micromanaging risk and achieving the "100 percent" solution. They are simply not designed for rapid response.

As a result of the bureaucratic nature of these processes, numerous rapid reaction programs and organizations have been established in recent years to respond to combatant commander needs—processes that work within and around the traditional system to get solutions into the field. While these programs have produced significant successes, their *ad-hoc*, one-of-a-kind nature has created a different set of problems. They rely on learning on-the-job with little emphasis on support, training, and sustainment. Because they were started during the war and outside the normal acquisition programs and PPBE cycle, nearly all these program activities have been funded from warfighting supplemental budgets.

While there has been progress, we observe that five years later, DOD's *ad hoc* "rapid" processes still experience unnecessary and bureaucratic delays in needs generation, vetting, fulfillment, and fielding. As of today, these programs continue to lack serious institutional commitment and very little is being built into the Service or other DOD budgets for these programs. It is hard to criticize the industrious nature of those in the Department who have made something happen when urgent needs have been presented; however, these approaches do not offer a long-term solution to circumstances that will not go away once current contingencies in Iraq and Afghanistan abate. As there is little doubt that the urgent needs from combatant commanders will continue, **the bottom line is that the ability to field critical war fighting needs requires a new approach—a standing acquisition and fielding capability that can fulfill these requirements in a timely way.**

Roadmap of the Report

This report begins in Chapter 2 with a discussion of the current way of doing business in DOD—how urgent operational needs are met today. It also provides

an overview of both the requirements and acquisition processes as they relate to urgent needs. Chapter 3 details the task force's principal findings, including some of the key reasons why the process is ineffective, the nature of its shortcomings, and the type of changes that are needed in devising a new approach. The report concludes in Chapter 4 with a summary of recommendations that offer a new approach for the future, and identify the key elements critical to its success.

Chapter 2. Addressing Urgent Needs Today

Traditional defense acquisition is comprised of three principal decision-making processes.

1. The JCIDS process assesses gaps in warfighting capabilities and develops requirements to resolve those gaps. This process is owned by the Joint Staff.
2. The Defense Acquisition System (DAS) manages the development and procurement of weapon systems and other equipment. This process is owned by the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)).
3. The PPBE process allocates resources, and is owned by two organizations in the Office of the Secretary of Defense—the Office of Program Analysis and Evaluation (PA&E) and the Comptroller.⁴

Today, when an urgent operational need is identified by a combatant command, a number of alternatives are available to fill it. At the first order is local identification and fulfillment of the need by the field commanders. The resources for this may be the use of a unit commander's operations and maintenance (O&M) funds. These operating funds are available to be used for expenses while in garrison and during exercises, deployments, and military operations. These funds fall under the *necessary expense rule* stipulating that any expense must be for a particular statutory purpose, or necessary or incidental to proper execution of the general purpose of the appropriation; must not be prohibited by law; and must not otherwise be provided for by some other appropriation.⁵ Currently, these funds have various ceilings applied by Congress for military construction and other uses. The funds can also be accessed in limited amounts via government-issued credit cards. In all of these cases, signature authority is at a low level and there is limited oversight or coordination of such purchases.

When a need is both urgent and too costly or complex to address using available local operating funds, multiple paths are available as next steps. These

4. The entire process is described in detail, both graphically and in text, at the Defense Acquisition University website, available at <https://acc.dau.mil/IFC/index.htm>. Accessed June 2009.

5. Decision of the Comptroller General. B-213137, June 22, 1984, 63 Comp. Gen. 422. Available at <http://redbook.gao.gov/14/f10067733.php>. Accessed June 2009.

more complex or costly needs go into one of two needs fulfillment paths: to the Service or to the Joint Staff processes, depending on the nature and source of the need. For needs that are clearly Service-specific and originate within the Service combat units, each Service has a process to accept urgent need statements. For example, if the need is for an Army field unit for an Army solution, the Army unit would submit a need via Army command chains and approval processes.

For needs that are clearly Joint, a combat unit submits a need through a combatant command to the proper signatory level using the JUONS process, initiated in November 2004. Because these are the most difficult and costly needs, signature approvals and authorities for these are at the highest levels. A JUONS is sent to J8, the U.S. Joint Forces Command's Joint Capability Development Directorate for validation, and then the J8 forwards this validated requirement to the Joint Rapid Acquisition Cell (JRAC). The JRAC then finds a resource and acquisition home in the Services or DOD agencies to address the requirement.

Processes and Organizations to Address Urgent Needs

Over 20 different *ad hoc* organizations within the Joint Staff, the Office of the Secretary of Defense, and each Service now have urgent need processes. The procedures these organizations have developed to generate, validate, and fulfill warfighting requirements vary across the DOD.⁶ The definitions and regulations that apply to these processes vary, and the words "immediate," "urgent," "contingency," and "rapid" are sometimes used in conflicting and overlapping ways. Similarly, the names and acronyms for similar processes also vary.

The variations in these processes reflect unique aspects of the Services and agencies, and there are many features that are common. Needs are generated in the combatant commands; then validation is a multi-step processes with high-level approvals; and those needs are fulfilled, primarily using acquisition processes in the Services. Implementation of these processes has evolved over the past five years to a current state that yields significant improvements in effectiveness; many have websites to collect "good ideas" as well as urgent needs.

6. Visual representations for several major stakeholder processes are included in Appendix B. These represent the organizations and the accelerated timelines that the Joint Chiefs of Staff (JCS), U.S. Central Command (USCENTCOM), the Services, JRAC, and the Joint Improvised Explosive Device Defeat Organization (JIEDDO) have adopted and institutionalized over the past several years.

In aggregate, they have reached a plateau from which further improvements can be made across the defense acquisition enterprise by leveraging best practices and lessons learned.

Urgent needs may arise from joint combatant commands, Service warfighting units, or other defense components. A JUON or Service urgent operational need (UON) is a need prioritized by a combatant commander and is defined as a need requiring a solution that, if left unfilled, could result in the loss of life and/or prevent the successful completion of a near-term military mission. The military departments, in their own vernacular, may use a different name for an UON—such as a combat-mission need statement (CMNS) or an urgent universal need statement (UUNS).⁷

Joint Urgent Operational Need

A JUON is an urgent operation need identified by a combatant commander involved in an ongoing named operation. A JUON's main purpose is to identify and subsequently gain Joint Staff validation and resourcing of a solution, usually desired within days or weeks, to meet a specific high-priority combatant commander need. The scope of a combatant commander JUON will be limited to addressing urgent operational needs that: (1) fall outside of the established Service processes; and (2) most importantly, if not addressed immediately, will seriously endanger personnel or pose a major threat to ongoing operations. They should not involve the development of a new technology or capability; however, the acceleration of an Advanced Concept Technology Demonstration or minor modification of an existing system to adapt to a new or similar mission is within the scope of the JUON validation and resourcing process.⁸

The allocation of funding for joint needs is shown in Figure 1. As is evident, more than 70 percent of the funding was used to fund two programs, the Mine Resistant Ambush Protected (vehicle) Task Force (MRAP TF) and the Joint Improvised Explosive Device Defeat Organization (JIEDDO). Both of these programs were focused on solutions associated with one adversarial weapon system—improvised explosive devices (IEDs).

7. U.S. Deputy Secretary of Defense Paul Wolfowitz, "Meeting Immediate Warfighter Needs (IWNs)," memorandum for Secretaries of the Military Departments, et. al., November 15, 2004, p. 3.

8. U.S. Department of Defense, Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONS) in the Year of Execution, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3470.01, July 15, 2005, p. GL-1.

Immediate Warfighter Need

A subset of JUONs, so designated as immediate warfighter needs (IWNs) by the Joint Rapid Acquisition Cell (JRAC). An IWN is a need statement requiring a timely (120 days or less) materiel or logistics solution that, if left unfulfilled, could result in the loss of life and/or prevent the successful completion of a near-term military mission.⁹ This special category was created by the Deputy Secretary of Defense in 2004 to bring added emphasis on the timely resolution of an urgent operation need and to ensure enhanced visibility to OSD and the Deputy Secretary of Defense.¹⁰

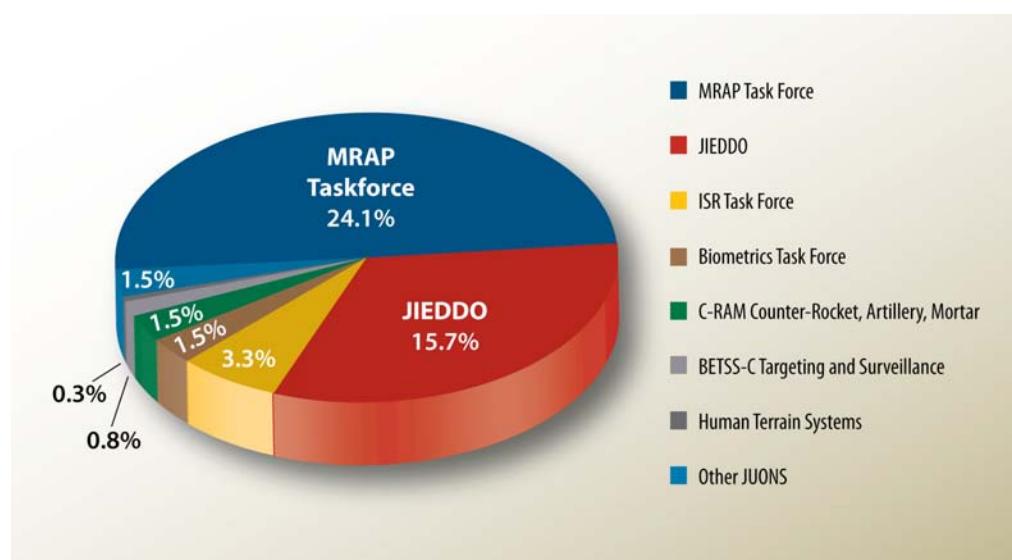


Figure 1. Allocation of funding for joint urgent operational needs, from 2005 through May 2009 totals more than \$50 billion.

ISR Task Force Directed Urgent Requirement

The Intelligence, Surveillance, and Reconnaissance (ISR) Task Force uses a directed urgent requirement (DUR) process. This can be initiated by any senior leader and is intended to capture requirements that have not gone through any other urgent need process or are listed on the integrated priority list (IPL).¹¹

9. Wolfowitz, p. 3

10. CJCSI 3470.01, p. GI-1.

11. LTG Richard P. Zahner, "ISR Task Force Process Manual," information memorandum for ISR Task Force, February 4, 2009.

U.S. Army

Army field commanders and combatant commanders are directed to identify urgent operational needs that jeopardize soldiers' lives or mission accomplishment in an operational need statement (ONS).¹²

Operational field commanders use an ONS to document the urgent need for a materiel solution to correct a deficiency or to improve a capability that impacts upon mission accomplishment. The ONS provides an opportunity to the field commander, outside of the acquisition and combat development and training development communities, to initiate the requirements determination process. Although Army regulations discourage field commanders from using an ONS for distribution and redistribution of inventory items, the ONS and JUONS processes have become the tool of choice to supply additional equipment needed to support changing missions.¹³ Since 2003, this type of use was reported to describe more than 90 percent of Army ONS supporting the warfighters in Iraq and Afghanistan.¹⁴

The operational definition of ONS is to meet an urgent need for a material solution "to correct a deficiency, improve a capability, or request Headquarters, Department of the Army (HQDA) to procure a new or emerging capability that enhances mission accomplishment."¹⁵ An ONS is a request for HQDA validation, authorization, and source of a perceived requirement. Currently, an ONS is not intended to request equipment already authorized.

The current operational definition includes other qualifiers such as: "commercial off-the-shelf (COTS) not authorized"; "additional quantities above approved [authorization]"; "not on [approved authorization] in any quantity"; "HQDA controlled equipment that ... unit does not have authorization or validation"; "any ... managed equipment requiring additional authorization"; and "equipment listed in validated [approved authorization] but specific item requested is either in lieu of the validated item or is a newer version not specified in the [approved authorization]."¹⁶

12. U.S. Department of the Army, *Material Development*, Army Regulation 71-9, April 30, 1997, p. 7.

13. For example, artillery units now needing infantry equipment, soldiers assigned to guard duty now needing side arms, units creating sniper teams now needing sniper rifles or scopes, and so on.

14. COL Steve Sliwa, US Army. Presentation to the Task Force. February 12, 2009.

15. U.S. Army, *Equipment Common Operating Picture (ECOP) User's Guide*. February 20, 2007, p. 5. [Available at <http://www.ecop.army.smil.mil/ecop/login.aspx>]

16. U.S. Army, ECOP User's Guide, various pages.

In addition, a “10-line capability gap” statement can be sent directly to the Army’s Rapid Equipping Force (REF) to begin the process, and is followed up with an ONS. The “10-liner” resembles the standard operational need statement and provides a variety of information related to warfighter needs.¹⁷ The 10 lines are as follows:

1. problem
2. justification
3. system characteristics
4. operational concept
5. organizational concept
6. procurement objective
7. support requirements
8. availability
9. recommendation
10. coordination accomplished

The REF differentiates between “equipping” and “fielding” as follows. Equipping is “a timely and evolvable rapid solution meeting or exceeding minimum doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) issues focused on the needs of a specific unit or theater” and has a goal to provide a 51 percent solution. Fielding, conversely, is described as “a complete and detailed DOTMLPF approach focused on a general solution for the entire Army.”¹⁸

Solutions delivered through the ONS and JUONS process typically take three to six months for COTS and existing systems, and 12 to 18 months for new technologies. The deliberate acquisition process is expected to deliver a capability in 3 to 5 years. Capabilities delivered in response to ONS documents that required significant research and development efforts included armor solutions, such as body armor and HMMWV fragmentation kits; modular protection systems for buildings; electronic warfare systems; counter-rocket, artillery, and mortar systems; night vision and optics devices; biometrics systems; increased

17. U.S Army Audit Agency, Rapid Equipping Force Initiative, Audit Report A-2007-0121-ALA, May 18, 2007, p. 6.

18. Rapid Equipping Force. *Strength of a Nation: Rapid Equipping of our Soldiers at War*. December 10, 2008.

lethality capabilities; unmanned systems and sensors; and power generation capabilities.

U.S. Navy and U.S. Marine Corps

In this context, an urgent operational need statement is an exceptional request from a Navy component commander “for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions or increases the probability of casualties and loss of life.”¹⁹

The solution strategy for a Navy UONS may be a mix of interim and longer-term solutions that include materiel and non-materiel elements. The recommended executive strategy may contain a mix of COTS, government off-the-shelf (GOTS), and nondevelopmental items (NDIs); products of a rapid deployment capability, targeted at slight modifications to materiel with a technology readiness level (TRL) 8 to 9; rapid development and deployment of prototypes, targeted at a TRL of 6 to 7; other research programs; and deliberate, or traditional, capability development processes.²⁰

An urgent universal need statement (U-UNS or UUNS) “is an exceptional request from a Marine Corps component commander for an additional warfighting capability critically needed by operating forces conducting combat or contingency operations. Failure to deliver the capability requested is likely to result in the inability of units to accomplish their missions or increases the probability of casualties and loss of life.”²¹ An UUNS may be originated only by units that are deployed to or awaiting imminent deployment to combat or contingency operations.

U.S. Air Force

The Air Force rapid response process (RRP) is intended “to satisfy [the] warfighters’ urgent and compelling requirements … [and to provide] the warfighter with a means of obtaining a limited number of needed systems/

19. U.S. Navy, *Department of the Navy Urgent Needs Process*, SecNavNote 5000, March 12, 2009, p. 2.

20. U.S. Navy, p. 4-5.

21. U.S. Marine Corps, *Marine Corps Expeditionary Force Development System*, Marine Corps Order 3900.15B, Enclosure 7: “Urgent Universal Need Statement Processing,” March 10, 2008, p. 1.

capabilities in a combat theater during an ongoing conflict or crisis to address a critical capability gap/shortfall that could result in "loss of life" and/or prevent mission accomplishment."²² An Air Force combat capability document (CCD) is intended to "support fielding an interim solution to a warfighter's urgent capability needs."²³

Urgent operational needs may be answered by the lead Air Force major command using any one of several different processes, of which the CCD and the RRP is only one. A CCD is used when the command requires assistance from the Chief of Staff of the Air Force "for the reprogramming or identification of funds and/or program management directive actions."²⁴

Special Operations Command

The default method used by the U.S. Special Operations Command (USSOCOM) capability is used "when materiel or non-materiel requirements are peculiar to the special operations forces (SOF) ... is compatible with [Joint Capabilities Integration Development System]."²⁵

USSOCOM is unique among Combatant Commands in that it can not only generate needs but also can perform acquisitions to provide solutions to its needs. The Special Operations Forces Capabilities and Development System-Urgent (SOFCIDS-U) may be used "when a SOF unit, either deployed or during pre-deployment, identifies an urgent and compelling capability gap or requirement derived from combat survivability deficiency or risk to operational success." Sponsors initiate the process by submitting a CMNS. Abbreviated procedures are then used to staff, validate, approve, and resolve the requirement. Each CMNS undergoes analysis and scrutiny to ensure it meets the required criteria for unacceptable force protection risk and/or mission failure.²⁶

In addition, a 9-line capability validation message is available for use by USSOCOM component commanders under the limited delegated authorities granted by the Commander of USSOCOM. This is an alternative mechanism for components to satisfy material solutions that do not require significant

22. U.S. Air Force, *Rapid Response Process*, U.S. Air Force Instruction 63-114, June 12, 2008, p. 1.

23. U.S. Air Force, p. 17.

24. U.S. Air Force, p. 3.

25. U.S. Special Operations Command, *Special Operations Forces (SOF) Capabilities and Development System (SOFCIDS)*, USSOCOM Directive 71-4 (draft), June 2009, § 1-4b.

26. USSOCOM Directive 74-1, § 1-4b, p.5.

development and represents a streamlined process that can be used for COTS, GOTS, and NDI solutions. The 9-line message may be chosen as the capability document to formalize sustainment of a materiel solution delivered by an approved CMNS, to include "expanding the basis of issue, provided it is an NDI/COTS/GOTS solution and will be funded by the component."²⁷

Current Understanding of "Urgent Need"

As part of the National Defense Authorization Act of 2005, the Congress passed the rapid acquisition authority to respond to combat emergencies. This provides for any equipment that, as determined in writing by the Secretary of Defense without delegation, is urgently needed to eliminate a combat capability deficiency that has resulted in combat fatalities. In this case, the Secretary may use the procedures developed in this legislation in order to accomplish the rapid acquisition and deployment of the needed equipment.²⁸ The requirements to address needs that have "resulted in combat fatalities" and only for "equipment [that] is urgently needed" is reflected in many of the definitions described here, and thereby limits the ability to use current rapid acquisition authorities.

Some component definitions use similar limitations. Specifically, the USSOCOM definition specifies that needs identified *during preparation for combat* may be addressed in addition to those incurred during active combat, and all allow for a non-materiel approach if analysis shows it as the most effective solution. **The task force found that a standard, clear and more inclusive definition of "urgent need" is needed across the Department of Defense.**

The intent and processing of urgent need statements has varied, both over time and among organizations. The task force believes that the intent of an urgent need statement was envisioned as a method to document gaps in required capabilities that may be met by new tactics, techniques, or procedures that may or may not be accompanied by new equipment. During the past five years, urgent need processes have been used to fill both materiel and operational capability gaps. **In some cases, operational need statements were used for rapid redistribution of inventory;** it was estimated that approximately 6,400 of 6,700 Army ONS were for this purpose.

27. SOCOM Directive 74-1, § 3-4a(3)(e)

28. Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Public Law 108-375, 108th Congress, October 28, 2004, Section 811, "Rapid Acquisition Authority to Respond To Combat Emergencies."

A key characteristic of many urgent need statements is that they describe both a need—a capability gap—and a proposed solution. The guidance for the REF 10-liner demonstrates the reasons for this well, in that it not only asks for system characteristics, but the requester must also supply support requirements and the availability of the proposed solution. While the task force was unable to search the text of all of the fulfilled need statements, some were clearly used to request specific acquisition outcomes (such as “1,169 MRAP-type vehicles” for use in Iraq²⁹) and others were reported to request brand-name systems or equipment from specified contractors.

The task force recognizes that satisfying an urgent need statement for a specific item or a narrowly specified solution may be a logistics function rather than acquisition. Consequently, a very necessary step is to perform triage on incoming urgent need statements to differentiate between the two. Fulfilling urgent logistics requests is very important, and any urgent response—especially one that involves commercial equipment—should include DOTMLPF considerations in order to trade off short-term benefits and long-term costs. In some cases, triage may reveal that acquisition of a different solution than originally proposed better fits the need, or it may identify the need to acquire a more developmental solution.

Evaluating a true capability gap in an effective and systematic way will also involve operations research and system analysis (ORSA) and analysis of alternatives in addition to DOTMLPF. This ORSA step, during the triage process as well as during solution development, is missing in many current rapid acquisition processes. **Addressing urgent need statements that describe a mission need or capability gap rather than a specific solution is critical to mission success.**

Rapid Response Organizations and Processes

The task force identified more than 20 organizations, processes, and funds with the purpose to address warfighter needs rapidly. Arrayed in Figure 2, they are listed alphabetically here:

29. DOD Inspector General, “Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles,” Report No. D-2009-030.

- Asymmetric Warfare Group (AWG)
- Base Expeditionary Targeting & Surveillance Sensors-Combined Task Force (BETSS-C TF)
- Biometrics Task Force (BTF)
- Combatant Commander Initiative Fund (CCIF)
- Capabilities Development Directorate (CDD)
- Commanders' Emergency Response Program (CERP)
- Counter Rocket, Artillery, and Mortar (C-RAM)
- Human Terrain System (HTS)
- Intelligence, Surveillance, and Reconnaissance Task Force (ISR TF)
- Joint Improvised Explosive Device Defeat Organization (JIEDDO)
- Joint Rapid Acquisition Cell (JRAC)
- Mine Resistant Ambush Protected (vehicle) Task Force (MRAP TF)
- Quick Reaction Fund (QRF)
- Rapid Acquisition Teams (RAT)
- Rapid Development and Deployment (RDD)
- Rapid Equipping Force (REF)
- Rapid Fielding Initiative (RFI)
- Rapid Reaction Fund (RRF)
- Rapid Response Process (RRP)
- Rapid Reaction Technology Office (RRTO)
- Task Force Observe, Detect, Identify, Neutralize (TF ODIN)

While not intended, the multiple organizations and processes available may allow simultaneous pursuit of different paths to access the funding allocated by Congress to respond to the uncertainty of wartime needs. These resources reside in a variety of special accounts that provide additional acquisition flexibility, including the Iraqi Freedom Fund, the Joint Improvised Explosive Device Defeat Fund, and the Mine Resistant Ambush Protected Transfer Account. These

"transfer funds" have higher levels of authority that allow DOD to move funds into different accounts after enactment.^{30,31}

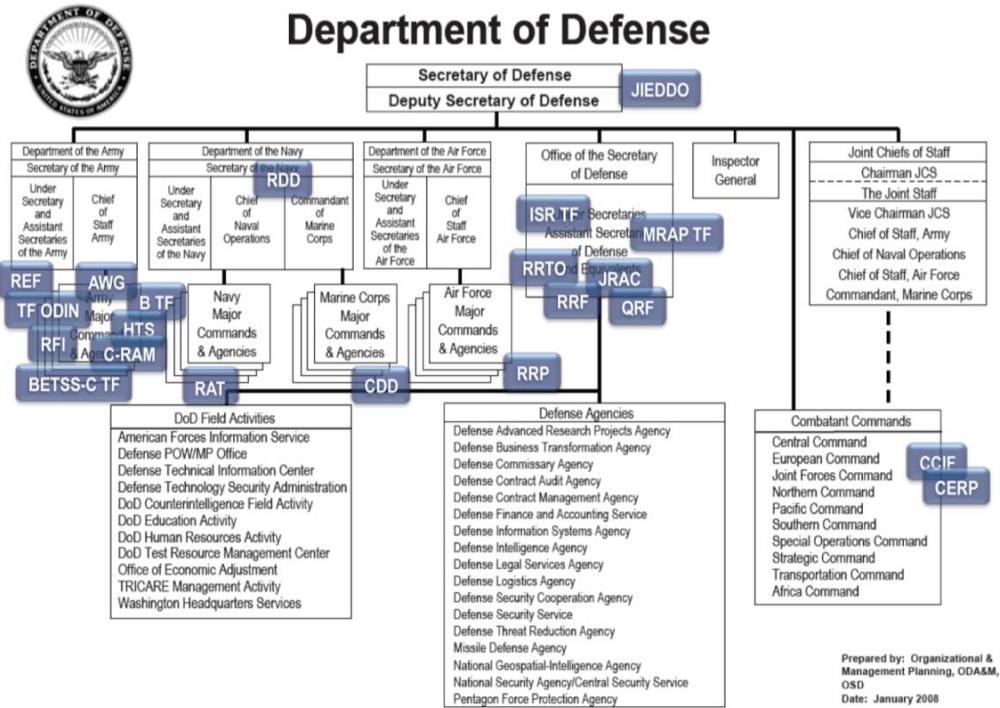


Figure 2. More than 20 different organizations, processes, and funds in DOD are aimed at urgent or rapid acquisition.

Extensive (and in some cases, mandated) oversight of major programs exists, for these and others, but there is no consistent system in place that documents total time and cost to satisfy each need statement. In general, the task force observed uneven tracking of field performance of the capability implemented or materiel delivered, and only *ad hoc* assessment of how original need was addressed. Further, there was little coordination among the Services to determine if needs were shared and solutions could be more widely applied. Most importantly, methods to assess sustainment needs or future-year costs have lagged implementation, with alarming consequences for future DOD budgets.

30. Amy Belasco, Congressional Research Service. *The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11*. RL33110. May 15, 2009.

31. General Accountability Office. *Defense Budget: Need for Continued Visibility Over Use of Contingency Funds*. GAO-01-829. July 2001.

There is an increasing need for formal or informal transition paths from rapid solutions to enduring acquisition. One effort in this area is the Army's capabilities development for rapid transition (CDRT) effort.³² CDRT identifies new technologies and capabilities in use in theater, evaluates their applicability to the Army at large, and makes recommendations for transitioning these technologies for Army-wide application and sustainment.

Tracking How Urgent Needs Have Been Addressed

In any wartime situation, it is clear that the first priority is to develop and deliver solutions to the warfighter in order to reduce casualties and improve mission success. In many cases, urgent needs demanded that new capabilities or technologies be envisioned, developed, manufactured, and shipped to units in the field without any testing or training—and in many cases this was justified as a quick reaction. Such an approach is, however, only effective if testing and training are done in parallel in an expedited fashion. When urgent needs were submitted by operational forces during the early years of the wars in Afghanistan and Iraq, long-term tracking systems that included support after fielding were not in place. As a result, when the task force searched for historical data, normative data were reported as unavailable for any data set through 2009, and only a few sparse data sets were available for the period 2002 through 2007.

The task force attempted to determine and analyze the time each organization used to generate, validate, and resource urgent need statements, and to implement both initial and final capabilities. Unfortunately, the organizations were unable to provide the task force with data, either in native format or in response to queries, indicating their own lack of visibility into the management process.

Issues in reporting data according to the separate phases of generation, validation, resourcing, implementation, and so on, was attributable to several factors. First, an urgent need may be initiated at several levels; by an initial entry into the online system by a unit in the field, by the staff of the combatant command, or at any headquarters in between. Times will appropriately vary in each case and do not support direct comparisons. Fulfillments also followed a number of different paths. Wherever possible, the data represent the time

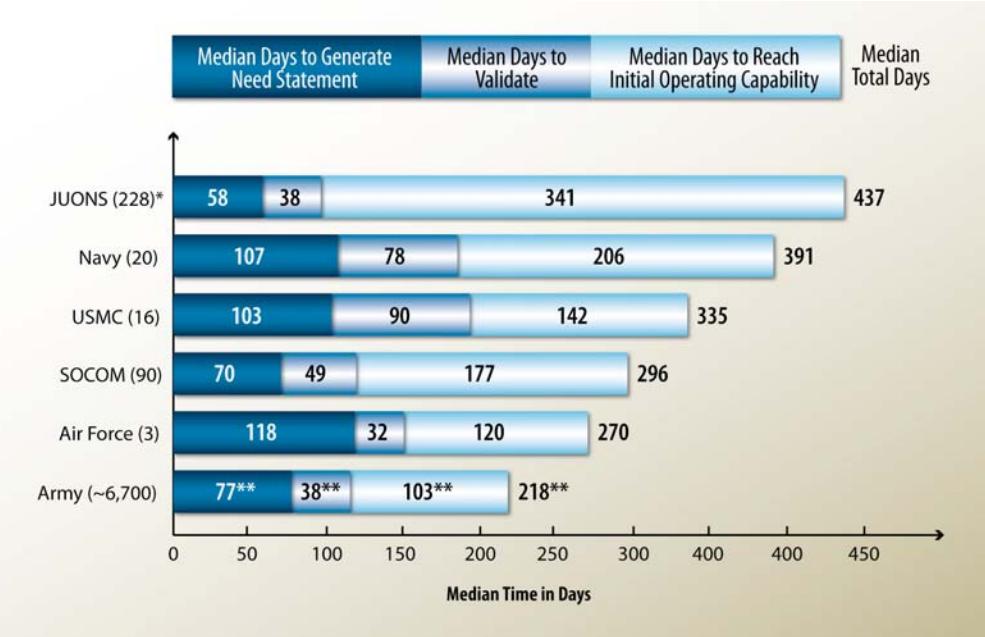
32. Spiral Technology and Capabilities Development for Rapid Transition to the Army. Available at http://www.army.mil/aps/08/information_papers/transform/Spiral_Technology_and_Capabilities.html. Accessed June 2009.

between the initial entry, at whatever level, and a final signature or decision by an oversight organization, such as the Marine Requirements Oversight Council.

Further, the times to validate and resource are performed in parallel wherever possible. USSOCOM, for example, stated that CMNS will not be approved without funds committed. In many cases, resources are provided by below-threshold O&M funding, which is at the discretion of the Service or command, and the need is satisfied without further tracking. The Marine Corps also reported that in a few, very early cases, supplemental funds were requested to resource a solution.

Overall, the tracking data available for the urgent need statements were not useful as a department-level management tool. The Marine Corps provided data for only 16 UUNS initiated after implementation of their "Virtual Urgent Universal Need Statement" system in October 2008, but indicated that more than 480 UUNS have been submitted since 2001. JIEDDO provided data only since 2008. The Navy provided some data for 20 UONS, and the Air Force reported only three UONS.

The Army system for handling ONS (the ECOP) was designed for the user in the field, and early versions of the system did not gather information for tracking. Owing to this lack of data, the Army provided only a single timeline that reflected an average over all 6,700 ONS. They also revealed that their ECOP system tracked both urgently needed solutions for capability gaps as well as urgently needed inventory redistribution, thereby skewing average responses to shorter times. More than 94 percent of Army ONS were for redistribution, e.g., artillery units now needing infantry equipment, soldiers assigned to guard duty now needing side arms, or units creating sniper teams now needing sniper rifles and scopes. The average reported data is shown graphically in Figure 3, and maximums and minimums show the range and variation of the data in Table 1. Additional information on times to implement each solution in the Services are provided in Appendix A.



* Numbers in parentheses indicate the number of need statements evaluated.

** More than 94 percent of Army ONS (~6,400) were for redistribution of inventory, which skews data to shorter times (e.g., Artillery units now needing infantry equipment, soldiers assigned to guard duty now needing side arms, units creating sniper teams now needing sniper rifles, scopes).

Figure 3. Estimated average time in days to generate, validate, and implement initial operating capabilities in response to urgent need statements.

The most complete data was provided for the 288 candidate JUONS submitted by COCOMs from 2005 through May 2009. Of these, 61 were sent to rapid Service processes or JIEDDO. Another 9 were merged with existing JUONS or other need statements. Five were rejected, for reasons including infeasible technology, safety concerns, and in three cases, these were a request for forces. Eight are currently deferred, awaiting questions related to approach, technology or policy. Of those remaining, 33 are validated, and implementation is underway or pending resources. An addition 49 have had initial operating capability (IOC) delivered, and assessments and additional delivery is in process. The final 110 are satisfied JUONs, with operational capability delivered and accepted by the combatant command.

Table 1. Times for generation, validation, and initial implementation of urgent need solutions.

Phase of Process	Median Time (Days)	Minimum Time (Days)	Maximum Time (Days)
Generation			
Joint Need	58	2	277
US Marine Corps	103	52	199
USSOCOM	70	1	575
US Navy	107	12	435
US Air Force	118	45	240
Validation			
Joint Need	38	1	255
US Marine Corps	90	44	168
USSOCOM	49	1	575
US Navy	78	21	176
US Air Force	32	8	75
Initial Operating Capability			
Joint Need	341	72	969
US Marine Corps	142	27	252
USSOCOM	177	5	552
US Navy	206	112	385
US Air Force	120	59	180

The lack of management tracking data points again to the lack of institutionalization of the urgent needs and rapid response processes. These many hundreds of urgent needs requests were evidently treated as exceptions for hand management or extraordinary tracking and reporting. Commanders and leaders clearly must have been demanding insight to these same kinds of urgent needs data elements requested by this task force. *How long is it taking to process an urgent need? Was it fulfilled?* While some reporting must have occurred, clearly these data do not reflect an efficient, controlled management process for a long-term DOD capability.

Chapter 3. Shortfalls in the Current Process

In examining the past and future fulfillment of urgent operational needs, the task force found first and foremost that the Services and the Office of the Secretary of Defense must be commended for stepping up to meet overwhelming challenges and urgent needs generated during a time of unanticipated and evolving warfighting situations. However, the following six findings document the shortfalls that were identified that could improve the process significantly.

Overall Findings

1. Multiple Acquisition Goals

All of DOD's needs cannot be met by the same acquisition processes. Desired systems, capabilities, and materiel may have major variations in urgency, technology maturity, and life cycle considerations. Collectively, these will dictate the appropriate procedures needed for effective acquisition and timely delivery. To facilitate these goals, DOD needs to codify and institutionalize "rapid" acquisition processes and practices that can be tailored to expedite delivery of capabilities that meet urgent warfighter needs.

Urgent needs expressed by the combatant commands require an extremely fast response. An extensive JCIDS process is not necessary, and an initial solution may be adequate—even if the solution is less than 75 percent satisfactory, the speed of response may be more important than delivering a 99 percent solution. By contrast, new major weapons systems, while capabilities-based on paper, carry the obligation that the requirements be approved by the Joint Requirements Oversight Council (JROC) and the JCIDS processes must be fully satisfied.

As opposed to traditional acquisition, in which better equipment is often perceived as the only solution, an urgent need may be met with new tactics, new capabilities, new materiel—based on proven technologies—or a combination of these. Also in contrast to traditional acquisition, test and evaluation should not be a pass or fail test, but rather should be used to determine capabilities and limitations—an approach the Army has successfully used to decide whether potential solutions to urgent requirements are good enough to be deployed.

Risk in traditional acquisition is perceived to be a show stopper if not minimized. Conversely, solutions that respond to urgent needs may carry risk, but the risk must be transparent, acknowledged, understood, and weighed against the attendant risk of proceeding along a more deliberate route.

Traditional acquisition must meet a number of mandatory milestones and reviews, and must fit into the PPBE schedule. Such acquisitions are consistently aimed at a 99 percent solution. While the same DOTMLPF considerations are important for rapid acquisitions, they can be approached incrementally. For example, while support must be part of the plan, it can be initially performed by a contractor.

2. “Rapid” is Counter to the Traditional Acquisition Culture

“Rapid” is countercultural and will be undersupported in traditional organizations. Rapid acquisition often challenges traditional systems, practices, and cultures. The current defense acquisition workforce is rewarded for following complex procedures with accuracy and precision and is punished for bypassing them. Rapid responses necessitate creativity and workarounds that go against these norms. Sustaining an effective rapid acquisition capability within DOD will require the active support of the testing, resourcing and requirements communities. The entire team must acknowledge that there is a place for rapid processes to meet urgent needs that functions concurrently with the deliberate and more comprehensive acquisition process for systems relying on new technology development.

“Rapid” is often perceived as a threat to a risk-averse DOD acquisition culture. The traditional system holds requirements sacred, whereas rapid requires the developer to question detailed requirements to meet the schedule for an initial fielding. Further, rapid innovation may be perceived to threaten personal credibility or the standing of a programs of record, resulting in a lack of support and resources for the innovation. Such perceptions may be an underlying reason that flexible and agile acquisition tools are rarely used, poorly understood, and generally considered to be risky. This all suggests some kind of dual acquisition process is needed.

Enabling a parallel acquisition option as a component of the mainstream process has not worked in other countercultural cases. History has established that a separate organization is required. A relevant example of this is the

establishment of the Defense Advanced Research Projects Agency (DARPA). DARPA was established to address disruptive technologies in a separate yet parallel manner to the Service acquisitions focused on more traditional, incremental developments. Similarly, IBM separated its personal computer division from its mainframe division. Other examples include unmanned aerial vehicles and cruise missiles, and more recently, MRAPs, JIEDDO, and the ISR task force.

As supplemental funds diminish, resistance by the traditional system will increase and priority of urgent needs from the combatant commands will decrease. This leads to the hope that, over time, the DOD acquisition community will understand the benefits of the rapid approach—and the countercultural stigma will dissolve. Only then can more flexible and agile processes be incorporated into mainstream practices.

3. Use of Proven Technology is Essential to Rapid Response

Any rapid response must be based on proven technology and robust manufacturing processes. Attempting to squeeze new technology development into an urgent timeframe creates risks for delays and not adequately addressing an existing capability gap. While there may be instances in which early fielding of prototypes with contractor logistics support is appropriate, the risks must be well understood and parallel efforts should be in place to mature the technology and to ensure that training and logistics are adequate for the system life cycle. An assessment of capabilities and limitations should be an integral part of the warfighter's acceptance of the system for operational use.

Initial deployment must be quick—a spiral development “Block I” solution delivered in weeks to months—to demonstrate the value of the solution to an urgent need established by a combatant command. To achieve such a timeframe, technology must be sufficiently mature, and likely will be filled by COTS/GOTS or a foreign government source.

Needs that cannot be met with mature technology—with a technology readiness level (TRL) greater than 6—should be handed to the defense science and technology (S&T) community as a high priority. The solution can further evolve (via spiral development) to a program of record if implementation is successful and the need remains persistent.

4. Ad Hoc Organizations

Current approaches to implement rapid responses to urgent needs are not sustainable. The DOD has done little to really adopt urgent needs and rapid acquisition as a critical, ongoing DOD institutional capability essential to addressing future threats. While many *ad hoc* processes are being formalized, these processes do not encompass the breadth or depth needed to ensure rapid response to future challenges. Further they are not being incorporated into Service budgets. These missions and programs that grew from the war do not have the impetus or adequate advocacy beyond the war; they will not stand up to long-term budget battles with Service programs of record.

The task force found more than 20 *ad hoc*, independent, and quasi-institutionalized organizations currently addressing urgent warfighter needs. All of these are attempting to achieve—and some are achieving—rapid capability. All also utilize workarounds, with senior-level support, to sidestep traditional acquisition and fielding processes, but these are generally disjointed. They sometimes fall short in needed outreach to Services and combatant commands, as well as to the commercial and global industry that could supply needed solutions. There was little evidence of useful institutional memory or tracking of lessons learned. Some were stood up to address specific limited needs sets and yet none had organizational sunset provisions. There was, however, evidence that some organizations are becoming bureaucratized with ballooning staffs and rules over time and these *ad hoc* flexible processes are growing more like the larger system they first sought to work around. Their light speed and urgent workaround techniques depend on the extraordinary push of wartime needs; as these ease up so will their ability to be rapid.

It is clear that urgent needs will endure beyond today's conflicts, and this points to the need to stand up a sustainable organizational capability for rapid acquisition and fielding. This capability needs to build on the advantages of current *ad hoc* processes that have found relief from the rigors of the formal, deliberate acquisition bureaucracy.

5. Lack of Integrated Triage

An integrated triage process is needed. A combatant command may identify a joint urgent need for several different reasons. To be most effective, the solution to this need should not be presumed without a

higher level view of all needs and a wider view of potential solutions. Responding to all must involve proven technology and be schedule-driven, but because all are different and resources are limited, triage is an important step.

All urgent needs are not alike, and the task force observed a wide continuum ranging from ill-defined capability gaps to requests for additional supplies of standard equipment. One of the most surprising facts the task force discovered was that more than 90 percent of submitted Army ONS were urgent requests for more or additional equipment needed from existing inventory. While important, the task force found that processing these requests in the same way as a need for a new and unique capability to be counterproductive.

Today, urgent needs submitted by a combatant command for a new capability are addressed by joint or Service-specific urgent need statement processes—JUONS, ONS, UONS, UUNS, and CMNS. The task force observed a related category: that of a perceived urgent opportunity—an innovative idea that can be a “game changer” and should be tried as soon as practical. This typically embodies an emergent capability.

An additional urgent need may be for a technology demonstration to demonstrate the value of a different (but proven) technology or approach. An example of these are how Joint Capability Technology Demonstrations (JCTDs) were used to demonstrate the utility of Predator and Global Hawk in 1995.

6. Institutional Barriers

Institutional barriers—people, funding, and processes—are powerful inhibitors to successful rapid acquisition and fielding of new capabilities. For success, these barriers must be addressed with explicit solutions.

The most formidable barrier to rapid and effective solutions to urgent needs is available, dedicated, flexible funds. This was the primary issue raised by every witness before the task force. Further, current acquisition and fielding processes are too complex to respond to urgent needs. Bureaucratic inertia prevents rapid response, and also does not access the full range of commercial options available to resourceful 21st century adversaries.

Another priority issue is people, including program managers, systems analysts and engineers, operations researchers, and relevant and experienced procurement people. This includes people both in the field and in the Pentagon, and requires everyone to work in integrated teams to support the warfighter's needs. Success is not envisioned without the best and brightest innovative thinkers who are solution-oriented, creative, and uninhibited by bureaucracy.

Attributes of a Solution

In addition to identifying the shortfalls, the task force also identified the attributes needed for successful rapid acquisition and fielding. These begin with an institutionalized capability to rapidly and efficiently deliver joint capabilities and extend to senior leadership priority and unwavering support.

The need for global marketplace awareness was also noted as critical, including welcoming solutions and ideas from anywhere, including commercial and foreign sources. Development of the MRAP vehicle was cited as an example. While this remains a very impressive response to a need, it is important to recognize the reliance on foreign technologies—the V-shaped chassis from South Africa, a European suspension system, Asian electronics, reactive armor from Israel, and so on—as key to successfully meeting a capability gap in a timely manner.

Increased use of all available contracting authorities—and the possible addition of some—were cited to enable speed and access to non-traditional suppliers. A funding model is needed that remains flexible while respecting DOD obligation and expenditure targets.

A radically different culture is also needed, one that is nurtured to be anticipatory, agile, schedule-driven, and capability-oriented. The people enacting such a process should be the best and brightest, and the workforce should be very lean and without a bureaucratic mindset. Personnel should operate in integrated teams involving the warfighter, acquisition, finance, technology, logistics, and training communities to enable speed and anticipatory thinking. The teams need to focus on delivering true solutions, with no “drive-by fieldings” that result in boxes of unused equipment stored away in warehouses owing to a lack of logistics support and operational training, leaving capability gaps unfilled. Leveraging commercial sector personnel can be a way to change the culture; rapid access to on call specialized capabilities may be available through pre-arranged contracting routes.

In searching for ways to make this happen, the task force evaluated current practices in the rapid acquisition community. The members found that while some good practices exist today, few are best practices deserving replication across the DOD. Some places where good practices worthy of further evaluation are listed in Table 2.

Table 2. Some good practices exist today, but few are “best practices.”

Best Practices Needed	Where it's Good Today
For involving the warfighter from beginning to end of process	JCTD, AWG, USSOCOM
For obtaining agile/flexible funding	JIEDDO, MRAP
To coordinate status and resolution for each need statement	SOCOM
For coordinating technology development	DDR&E, USAF Big Safari
To evaluate effectiveness of the implemented solution	USSOCOM, AWG
For test and evaluation	Army
To determine whether to end or to transition each implementation	--
For a knowledgeable workforce for all rapid acquisitions	USAF Big Safari
For business approaches that use existing flexibilities	DDR&E, DARPA, USAF Big Safari, MRAP
For institutionalizing the rapid response process	Navy/USMC
For collaborative innovation	Private sector

Chapter 4. A New Way Ahead: Recommendations

The task force puts forth the following five recommendations for consideration by the DOD.

RECOMMENDATION 1. THE SECRETARY OF DEFENSE SHOULD FORMALIZE A DUAL ACQUISITION PATH

"Deliberate" and "rapid" acquisition are incompatible processes as currently configured in DOD, and have different acquisition goals, as described in Finding 1 in Chapter 3 of this report. The task force concluded that these would be better handled in separate organizational elements and with separate budgeting guidance. Solutions may start as either rapid or deliberate acquisitions, depending on the urgency as well as the technology availability and maturity. In the proposed process, rapid acquisition would basically be consistent with the DOD 5000 series, but carried out in an integrated and compressed manner. Figure 4 depicts the envisioned architecture of this separation.

In the traditional, or deliberate, acquisition process, the goal is a 99 percent solution, which translates to delivery in 3 to 11 years or more. A rapid acquisition process, conversely, is satisfied with at a 75 percent solution or sometimes less, with the major focus on delivery within 24 months.

Deliberate acquisition is optimized for delivery of complex systems, and is scalable to very large military solutions. As such, it uses detailed, extensive, and large-scale oversight and synchronization to ensure success. It includes resources for sustainment, and is well adapted to individual Service cultures. Owing to the long-time frame, this process often begins by pushing the state of the art of the underlying technologies.

Rapid acquisition operates quite differently. To be responsive to combatant command timelines, execution is decentralized. Participation by small and nontraditional businesses is sought. Risk is mitigated through the use of proven technology that is rapidly transitioned via competitive prototyping. More advanced or extensive capabilities are provided in subsequent builds through spiral development. Resources for sustainment and training are integrated and delivered in parallel with initial operating capability.

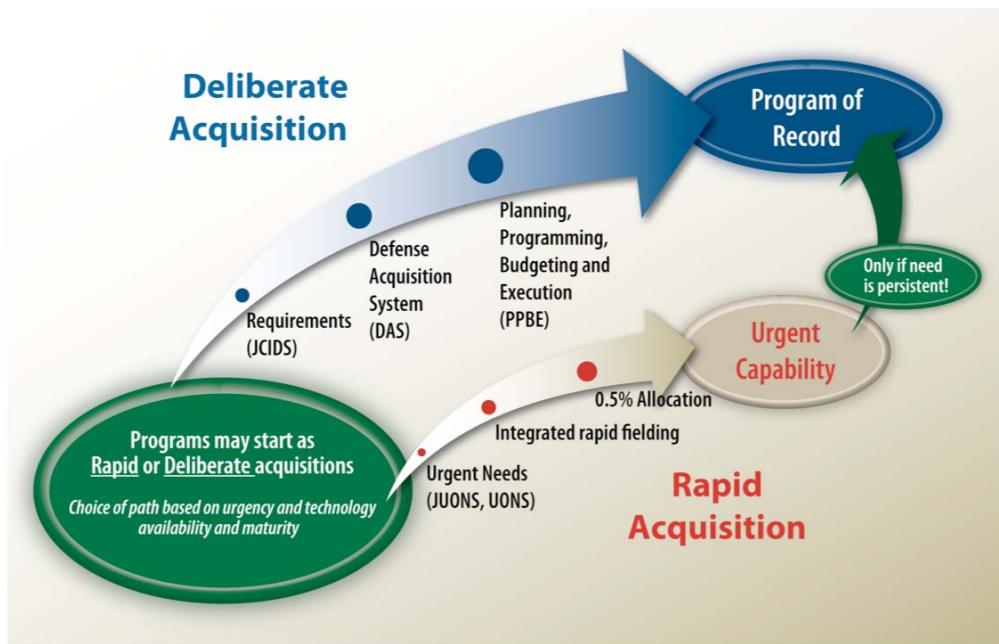


Figure 4. A dual acquisition path is proposed.

An effective triage step that determines the path an acquisition will take requires that a standard, DOD-wide definition be established for the rapid acquisition path. This definition should state that an urgent need is one that *if left unfulfilled, will seriously endanger personnel and/or pose a major threat to ongoing or imminent operations.*

Further, the triage process should determine quickly whether the need can be addressed through a logistics process. This describes a need that can be filled with additional inventory items, for example, or with commercial materiel with adequate commercial support, sustainment, and training. When this is determined to be the case, the urgent need should be referred to the appropriate service acquisition organization.

RECOMMENDATION 2. EXECUTIVE AND LEGISLATIVE BRANCHES MUST ESTABLISH A FUND FOR RAPID ACQUISITION AND FIELDING

To fund incremental contingency costs (for conflicts such as in the Balkans), Congress established the Overseas Contingency Operations Transfer Fund to address stability and reconstruction costs incurred as a result of military

operations. A similar approach is proposed to respond to urgent needs from any combatant command as a result of on-going action or an imminent threat.

An appropriate amount for such a fund is difficult to determine, considering the lack of knowledge of future urgent needs. In light of this uncertainty, the task force suggests 0.5 percent of the DOD budget is appropriate in the current environment. This investment mechanism is similar to the appropriation for small business innovative research (SBIR); it would be replenished annually with a proposed cap of approximately \$3 billion plus inflation. As a point of reference, the response to the IED threat approached \$10 billion per year. To be fully responsive to the types of urgent needs in the recent past and anticipated in the future, the funding should not expire, nor should the funds be limited to certain spending classifications, e.g., for materiel, for modeling, or for tactics.

This fund would not be contingent on an on-going war. It is intended to operate with different acquisition goals as compared to “deliberate” acquisition, based on Finding 2 in Chapter 3 of this report, that “rapid” is counter to the traditional acquisition culture.

To be effective in such a rapidly changing environment, the fund should operate with high transparency, including quarterly summary reports to Congress, with additional notification as needed. An oversight group would hold periodic meetings to aid in prioritization. The co-chairs of such a group are proposed to be the Under Secretary of Defense for Acquisition, Technology, and Logistics and the Vice Chairman of the Joint Chiefs of Staff (VCJCS). Representatives from the combatant commands and the Services would serve as members, and Congressional appropriators may be included as permanent observers.

RECOMMENDATION 3. THE SECRETARY OF DEFENSE SHOULD ESTABLISH A NEW AGENCY: THE *RAPID ACQUISITION AND FIELDING AGENCY (RAFA)*

The task force evaluated a number of alternatives to address the issue of *ad hoc* organization raised in Finding 4 of this report. The result is a proposed organizational home for the rapid acquisition alternative in a new agency within the office of the USD (AT&L). The new agency, with a proposed name of the Rapid Acquisition and Fielding Agency (RAFA), will be focused on speed, utilizing existing technologies and acquisition flexibilities to get a 75 percent solution—initially adequate to address the urgent needs of the warfighter.

Such an organization is necessarily joint and could be organizationally similar to other defense agencies, including the National Security Agency or the Defense Logistics Agency. It should be headed by a 3-star-level officer who reports directly to USD (AT&L) for high-level support and visibility, and who operates with a dotted line to the VCJCS. The agency works in partnership with the Services' acquisition, doctrine, training, and sustainment elements. Ideally, each Service would also establish their own rapid acquisition organization within the Service Acquisition Executive's purview that would work in close collaboration with the RAFA.

It is important to note that RAFA would not overlap with DARPA's function to carry out disruptive technology developments and demonstrations within a 3- to 5-year time frame. As well, it does not overlap with the major role of the Director for Defense Research and Evaluation (DDR&E), which focuses on next generation systems, and subsystems, and technologies. See Figure 5 for a comparison of these missions.

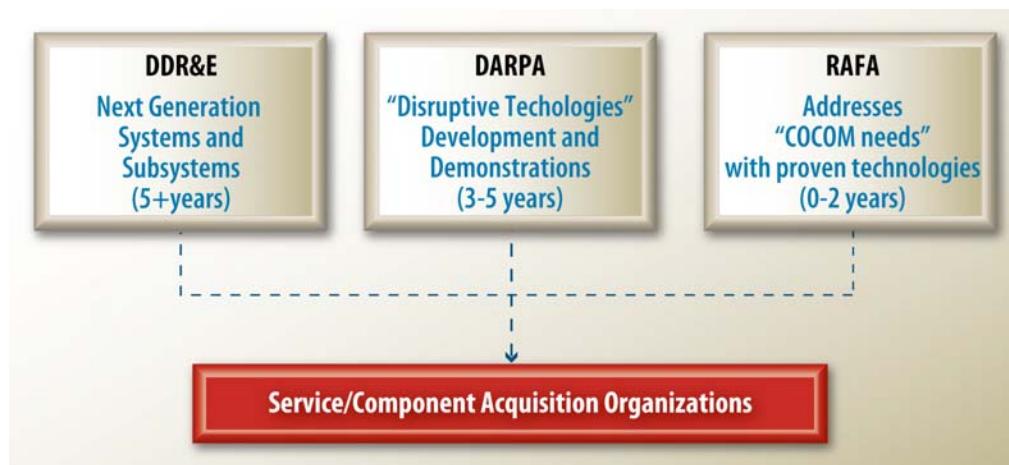


Figure 5. A notional comparison of organizational responsibilities according to outcome timelines.

One successful approach to a similar challenge is that taken by the USAF "Big Safari" program, which operates 40 programs, including 25 large ones with individual program officers. Big Safari has approximately 280 people, many hand-picked by the director. The program maintains agreements with long-standing suppliers, and has justification and approval authority for less than full and open competition, which is carried out through limited competition among

demonstrated suppliers. The Big Safari budget averages just over \$1 billion per year.

RAFA is designed to operate with a new mission and culture. **RAFA's mission is to rapidly address combatant command needs with proven and emerging technologies in 2 to 24 months.** The need to use proven technology to achieve rapid response is Finding 3 in Chapter 3 of this report. To accomplish this mission, RAFA personnel will do the following:

- Utilize Service acquisition offices to the maximum extent possible for execution, but also maintain internal contracting and finance surge capabilities.
- Recommend both materiel and non-materiel solutions.
- Facilitate spiral development and modular open systems architecture (MOSA) to develop and field initial new capabilities (Block I prototypes) in two months to no more than 24 months.
- Reach out to COTS/GOTS, commercial, and foreign sources via an "Open Business Cell" and take full use of flexible procurement options, e.g., competitive prototyping, Other Transactions Authority, and congressional waivers.
- Provide oversight, milestone planning, tracking, and transition of execution of solutions for urgent needs and advocate within OSD to expedite rapid acquisition programs managed by the Services.
- Track fielding to include DOTMLPF (especially training, sustainment, and support) in coordination with Services and combatant commands.
- Actively capture lessons learned, share experiences, and promulgate best practices.
- Scan for intelligence input and development of new technologies that are less than TRL 7 to respond to future needs.

The workforce for RAFA is intended to be small enough to be effective, but large enough to accomplish the tasks. The capabilities needed in RAFA include solid acquisition knowledge and experience across the DOD Services and components; understanding of current operational tactics, techniques, and procedures; knowledge of rapid manufacturing processes and supply chains; familiarity with commercial acquisition, foreign sources, and flexible contracting and finance tools; capability for scanning and sorting new technologies; operations research and systems analysis; and net assessment skills. Given the

breadth of this portfolio, a staff of approximately 250 military and civil servant personnel is envisioned.

An important function for RAFA is to **provide integrated triage for incoming needs from combatant commands**. The organization will work closely with the Joint Staff to coordinate prioritization, work with the OSD Comptroller and the Director of Program Analysis and Evaluation on resourcing, and will coordinate with the supporting Services on the DOTMLPF aspects of implementation. The task force envisions that RAFA will form and dissolve task forces or capability teams as needed. Working with the teams and an internal operations research and systems analysis capability (with appropriate "hot base" expertise), RAFA will carry out rapid analysis of alternatives and cost and performance systems engineering. Once the technology maturity is assessed (ensuring it is TRL 6 or higher) RAFA will propose appropriate solutions and alternatives. In this way, RAFA will determine whether the acquisition should be carried out using a rapid or deliberate approach.

As part of their operations research and system analysis function, RAFA will also commission independent red teaming. Finally, RAFA will coordinate with interagency urgent needs for homeland defense, intelligence community, and others.

People are the key to the success of RAFA. Strong military and civilian personnel with relevant experience are needed. To get the right people, flexible hiring authority is needed and the RAFA director must be able to hand-pick some employees. The importance of flexible staffing is delineated in Finding 6 in Chapter 3 of this report, describing the institutional barriers to rapid acquisition. The benefits associated with this are multiplied when people rotate and carry the RAFA culture back to other organizations in the DOD.

Incentives are needed to enable the military to attract and retain the best and brightest. Methods include making "nominative assignments," targeting Service personnel with high promotion potential (to include former program managers with high potential for selection as acquisition general officers) and identifying positions as "key development positions." RAFA service will also give an individual joint credit, and could be made part of precepts by Service secretaries. A consideration is to code only some billets as acquisition billets in order to get a mix of military operators and acquisition personnel on the staff.

It is equally important to get the best and brightest in RAFA's civilian workforce. Identifying positions as "key development positions" and advertising

to individuals who “love a challenge” and “want to make an impact,” are suggested strategies. Giving these individuals the authority and responsibility to make a difference can be a powerful incentive. In addition, RAFA should target 10 percent of its workforce from outside the Department of Defense. Several programs provide flexibility for DOD to attract and retain talented men and women with expertise and corporate knowledge to fill critical positions. These programs include:

- Highly Qualified Experts (HQEs). Section 9903 of title 5, U.S.C. within the FY04 National Defense Authorization Act (NDAA) gives the Secretary of Defense the authority to establish a DOD program to attract HQEs with state-of-the-art knowledge in fields of importance to the mission of DOD. HQEs can be employed for five years with the potential for a one-year extension. Compensation packages that are competitive with the private sector can be offered to HQEs.
 - Presidential Management Fellows (PMFs). The PMF program is a 2-year paid government fellowship to attract to federal service outstanding men and women from a variety of academic disciplines and career paths. PMFs are hired at GS-9/11/12 levels and are eligible for conversion to career or career conditional at the end of two years.
 - Intergovernmental Personnel Act (IPA) Assignment. The IPA provides the government the ability to noncompetitively hire an employee with specific expertise from academia, national laboratories, and state or local governments for a limited time. Assignments can be made for up to two years, can be intermittent, part-time, or full-time and may be extended an additional two years.
 - Section 1101 Authority. Section 1101 of the FY99 NDAA grants the Secretary of Defense special authority to facilitate recruitment of eminent experts in science or engineering outside normal civil service procedures. These employees may be offered rates of pay and pay increases and annual bonuses bounded by the limits established for senior level positions. This authority is designed to attract individuals from private industry.
-

RECOMMENDATION 4. INITIAL FUNDING AND BILLETS FOR RAFA WILL BE BASED ON ABSORBING AND INTEGRATING EXISTING PROGRAMS AND ORGANIZATIONS

The task force recommends easing the transition to the new organization by drawing initial billets and budgets from the current *ad hoc* efforts in the Office of the Secretary of Defense.

Depending on the persistence of the need addressed, the task force recommends some *ad hoc* organizations would become programs of record and transition to Services. These transitioned organizations would continue to act and staff jointly, similar to how the Joint Program Executive Office for Chemical and Biological Defense (JPEO Chem-Bio) and the Joint Strike Fighter (JSF) office operate. This follows the example of the Counter Remote Control Improvised Explosive Device Electronic Warfare (CREW) Block 3 that has become a joint program of record. Billets that remain in OSD can be assigned to RAFA, and additional billets can be assigned from the ongoing expansion of the acquisition workforce.

Another category of organization would be absorbed, with both billets and budgets, into RAFA once it is established. Existing budgets will provide approximately \$500 million starting capital for RAFA. These organizations and programs include:

- Two demonstration programs: the Coalition Warrior Interoperability Demonstration (CWID) and the JCTD program.
- The RRTO, a future-looking organization.
- Two relevant funds in the RRTO: the Quick Reaction Fund and the Rapid Reaction Fund.
- Other relevant programs in RRTO are the Open Business Cell, the Office of Force Transformation, and the JRAC.

RECOMMENDATION 5. DOD SHOULD ESTABLISH A STREAMLINED, INTEGRATED APPROACH FOR RAPID ACQUISITION

RAFA should follow an essentials only timeline for satisfying urgent operational needs from the combatant commands. The outline of such a timeline is shown in Figure 6.

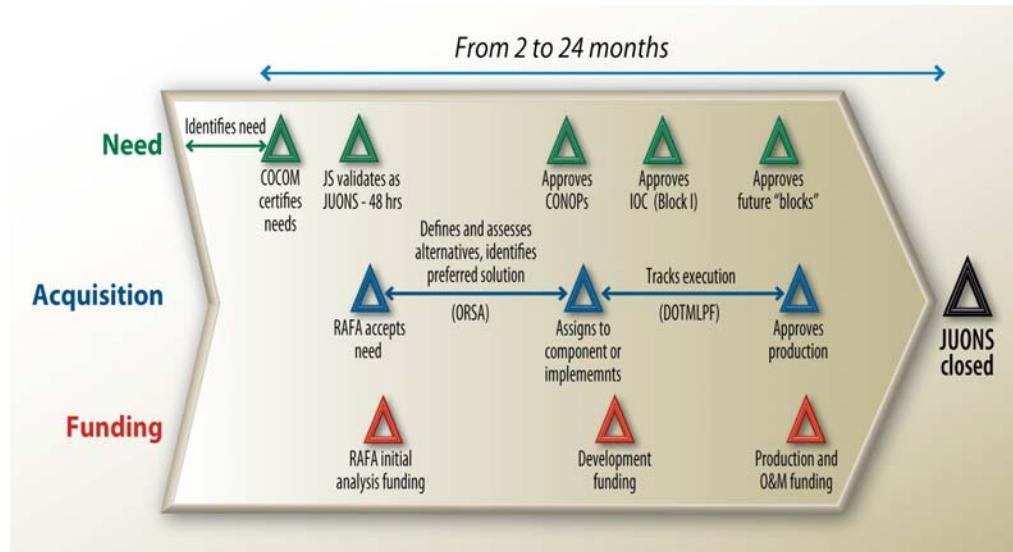


Figure 6. An integrated, streamlined approach for joint rapid acquisition.

In this framework, needs, acquisition, and funding steps are tightly coordinated. Capability needs are generated, certified, and validated quickly, and then acquisition personnel analyze alternatives in conjunction with an initial analysis of funding needs and availability. This integrated triage step is critical, as described in Finding 5 in Chapter 3 of this report. Once a solution is identified, it is approved, assigned to an acquisition organization, and funding is applied. Execution is concurrently tracked while DOTMLPF considerations are evaluated and an initial operating capability is approved. Successful completion of these steps leads directly to production and fielding of an initial operating capability and a transition to production or O&M funding.

RAFA provides continuous oversight of all steps in the urgent needs process and also provides a liaison to the combatant command who authored the urgent need statement. The RAFA director has acquisition and funding decision responsibility, and RAFA and the combatant command jointly approve and validate the need, concept of operations (CONOPs), and the proposed IOC.

The timeline is intended to provide maximum flexibility to minimize time; for example, funding may be initially allotted for analysis, and if not fully used then transferred to development or low rate initial production. In other cases, it may be clear that no research is needed at all, and funding should immediately be applied to the purchase of existing equipment from a foreign government source. Such decisions must be made routinely within RAFA to meet short time targets.

For these reasons, funding cannot be tagged for only one use or another. This is typically referred to as "no color" money.

To execute the program, RAFA and each Service would jointly manage production (as appropriate), and RAFA would work with each Service to integrate DOTMLPF and life cycle issues. Thus, if this process were in place when the need for mine-resistant vehicles arose, a much more efficient timeline could be envisioned to validate the requirement, analyze alternatives, and fulfill this urgent operational need with consideration for training, support, and sustainment.

It is imperative that the Secretary of Defense, the Joint Chiefs of Staff, and the Service leaders start now to implement all five of these recommendations. Existing urgent needs remain waiting to be fulfilled with ever more limited resources, and the potential for new and even more devastating capabilities from adversaries loom large. The men and women of the Armed Forces in harm's way deserve this support.

Appendix A. Normalized Data for Time to Resolve Need Statements

The following figures, A-1 through A-3, present distributions of time in days needed to resolve joint urgent operational need statements (JUONS) by the Joint Rapid Acquisition Cell (JRAC), urgent operational need statements (UONS) by the U.S. Navy, urgent universal need statements (UUNS) by the U.S. Marine Corps, and combat mission need statements (CMNS) by the U.S. Special Forces Command (USSOCOM). For comparison purposes, the data have been normalized to one-hundred percent and do not include missing data. Numbers of need statements are grouped in 30-day increments. Maximum, minimum, and median days to complete each process are included in Table 1 in Chapter 2 of this report.

No data for individual need statements was received from the Army, so it was not possible to examine a distribution. Because data was provided for only three Air Force need statements, those are not included.

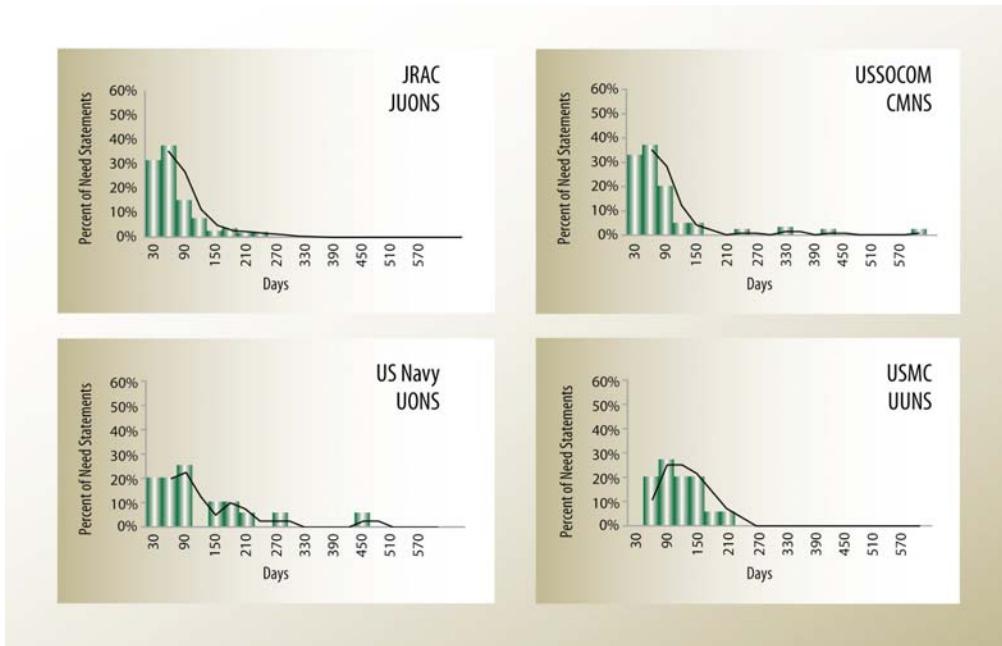


Figure A-1. Normalized time in days required to generate urgent operational need statements.

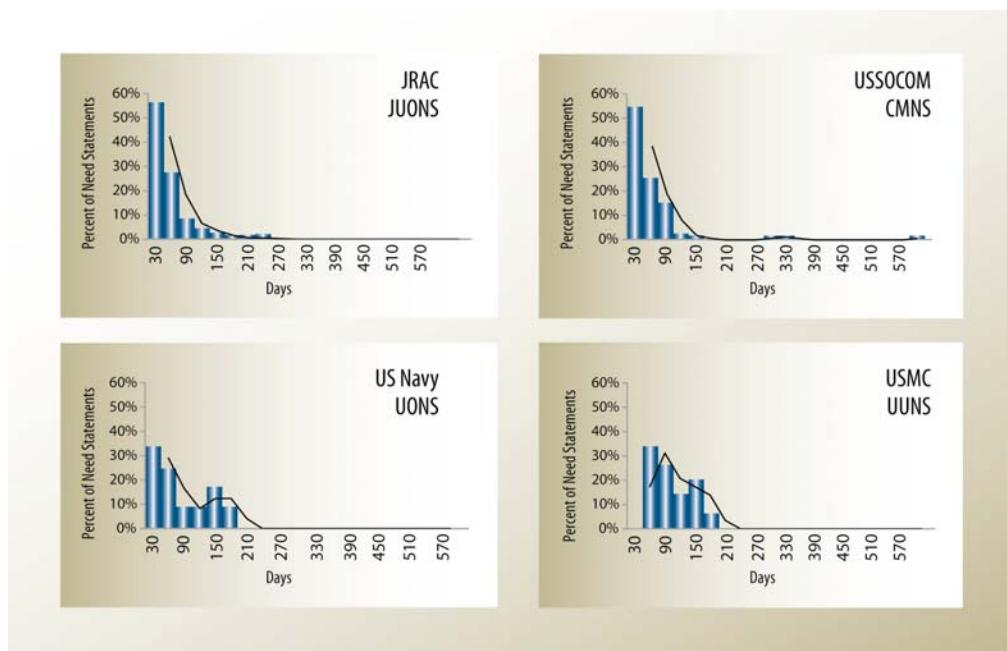


Figure A-2. Normalized time in days required to validate urgent operational need statements.

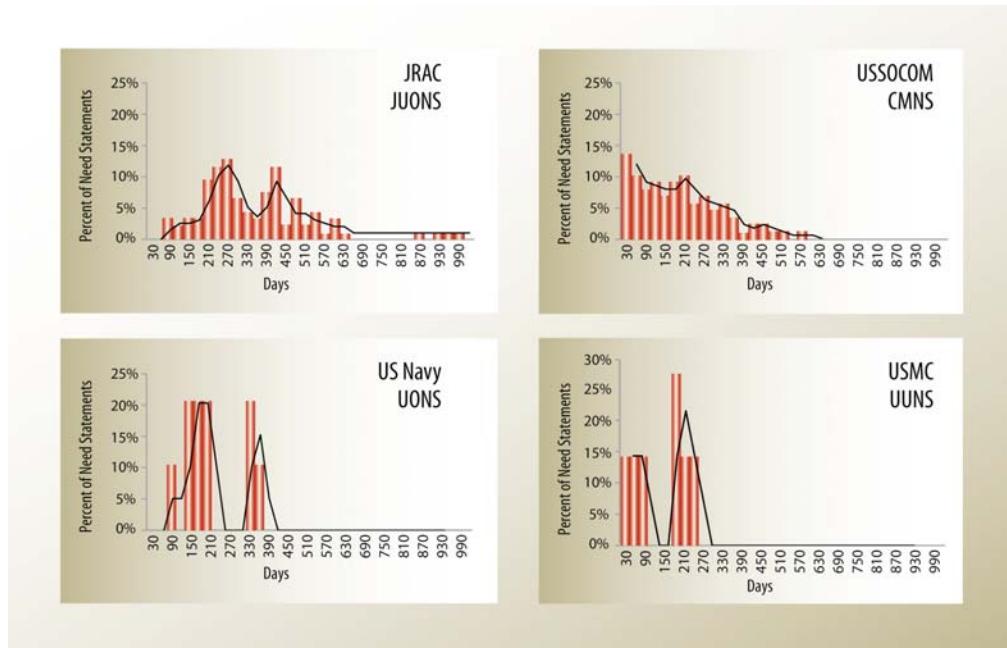


Figure A-3. Normalized time in days required to implement initial capability.

Appendix B. Process Visualizations for Fulfilling Urgent Operational Needs

For comparison purposes, the following process flow charts are included that depict processes used to generate, review, validate, assign resources, and (in some cases) fulfill warfighting requirements through the urgent operational needs and joint urgent operational needs processes. The figures B-1 through B-7 include the rapid acquisition processes of the military departments, as well as the Joint Chiefs of Staff, the Joint Improvised Explosive Device Defeat Organization, and the Joint Rapid Acquisition Cell. This information was provided to the task force as part of briefings on the dates noted for each figure.

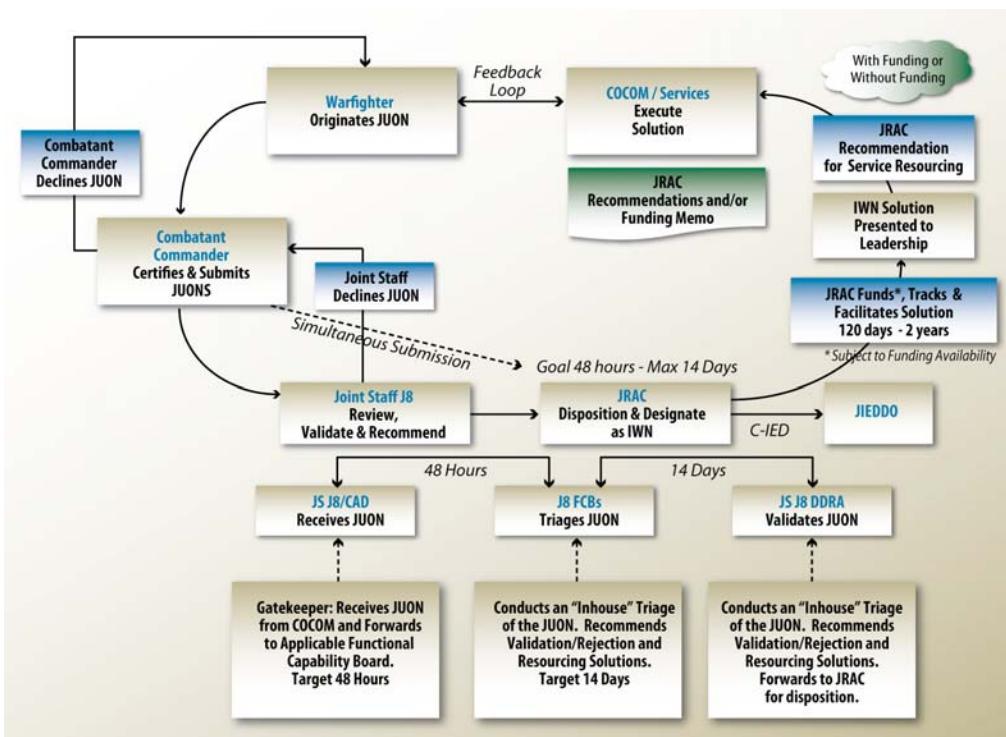


Figure B-1. Process used by the Joint Chiefs of Staff and the Joint Rapid Acquisition Cell to review, validate, and fulfill joint urgent operational needs. Presented to the task force on February 12, 2009.

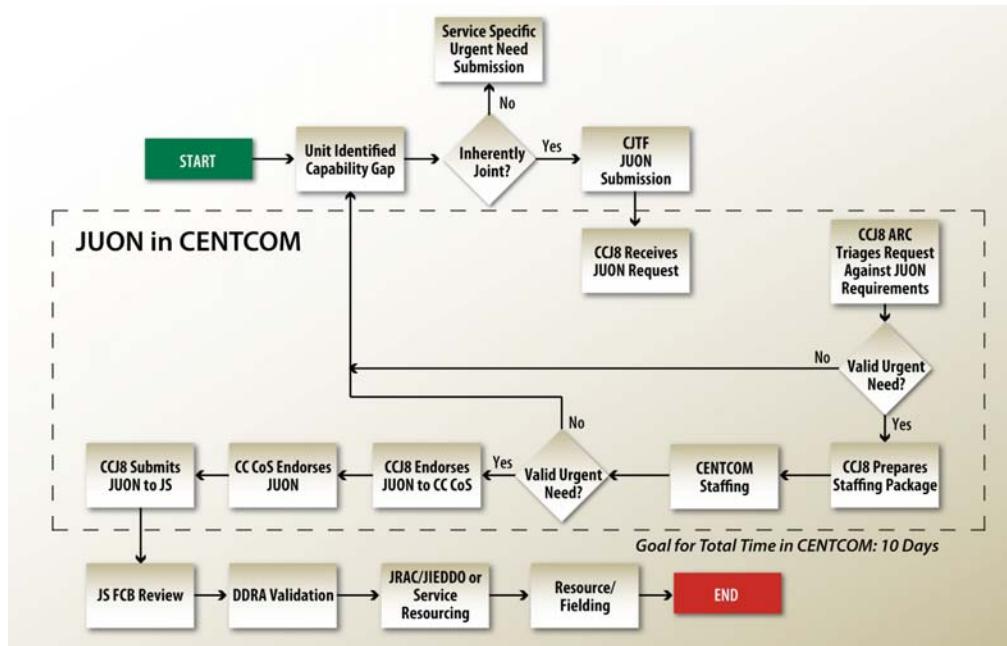


Figure B-2. Process used by the U.S. Central Command to review, validate, and assign resources for joint urgent operational needs. Presented to the task force on February 12, 2009.

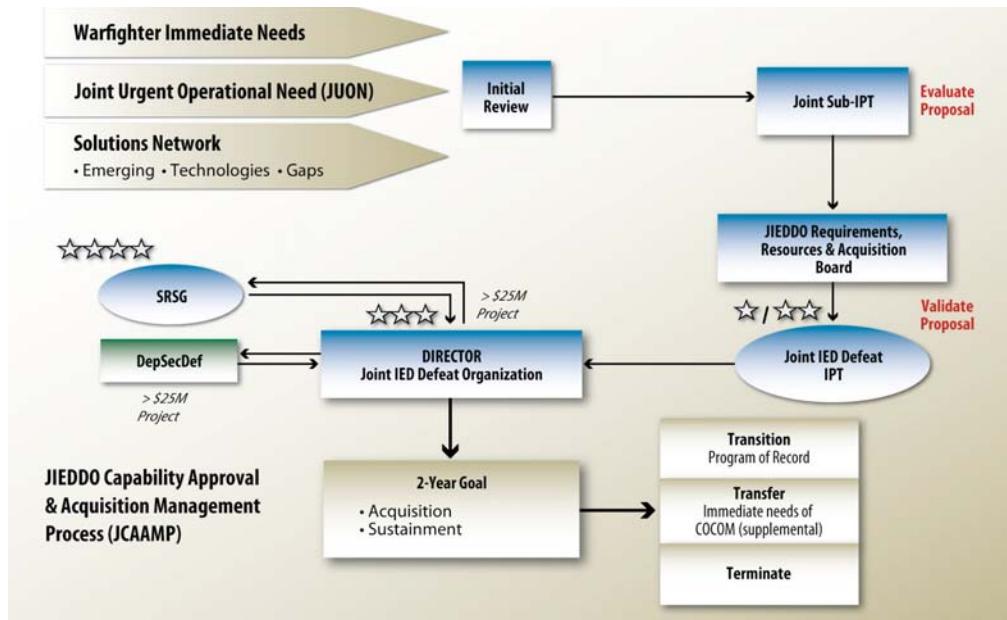


Figure B-3. Process used by the Joint Improvised Explosive Device Defeat Organization (JIEDDO) for assessing joint urgent operational needs. Presented to the task force on May 28, 2009.

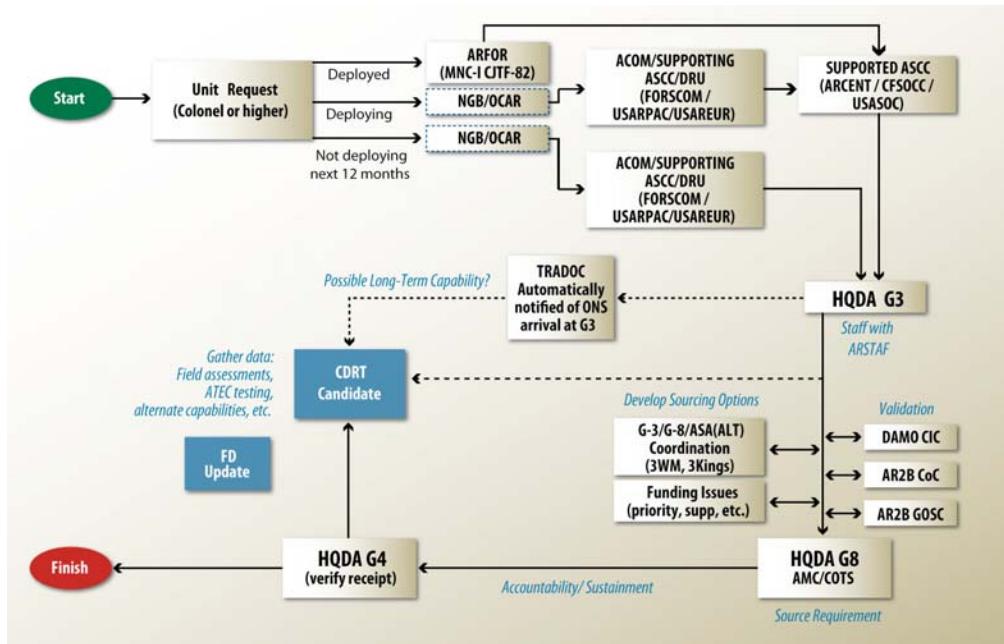


Figure B-4. Process used by the U.S. Army to review, validate, and assign resources for operational need statements. Presented to the task force on February 12, 2009.

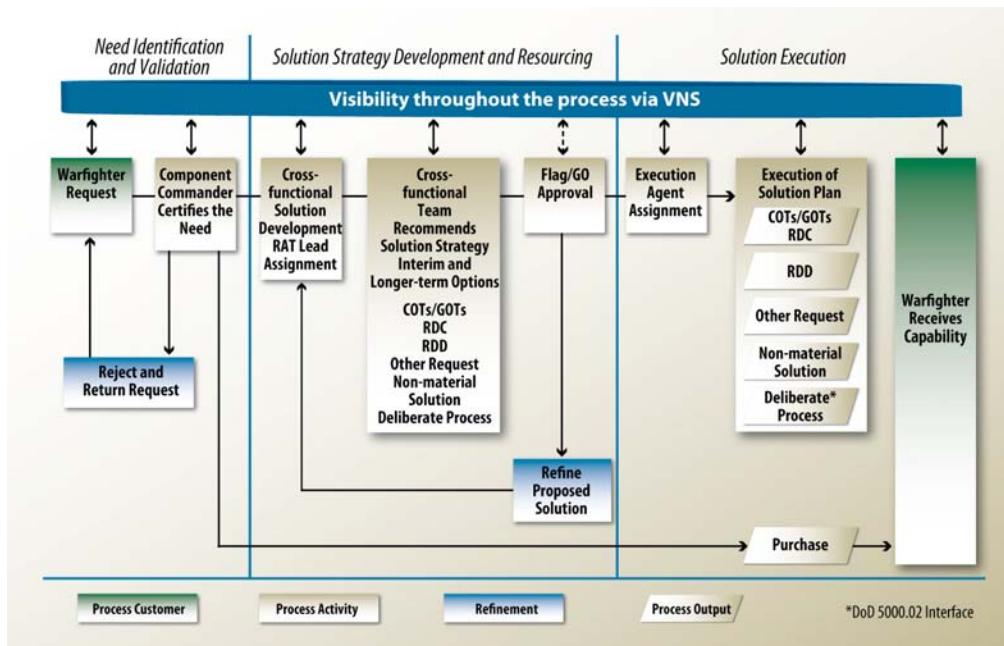


Figure B-5. Process used by the U.S. Navy to review, validate, and fulfill urgent operational needs. Presented to the task force on February 12, 2009.

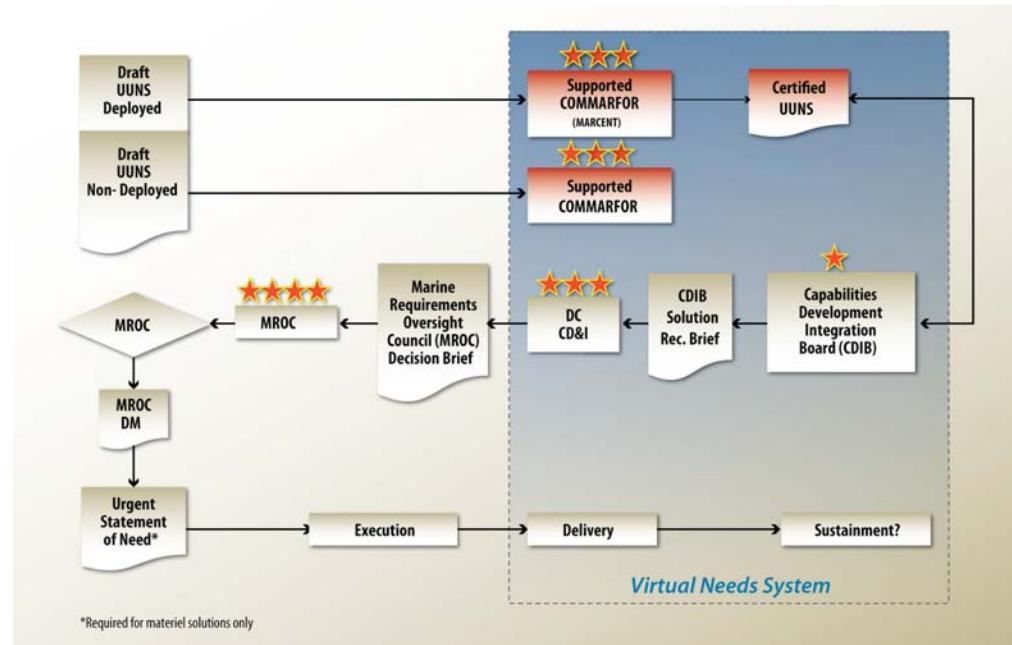


Figure B-6. Process used by the U.S. Marine Corps to fulfill urgent universal needs. Presented to the task force on February 12, 2009.

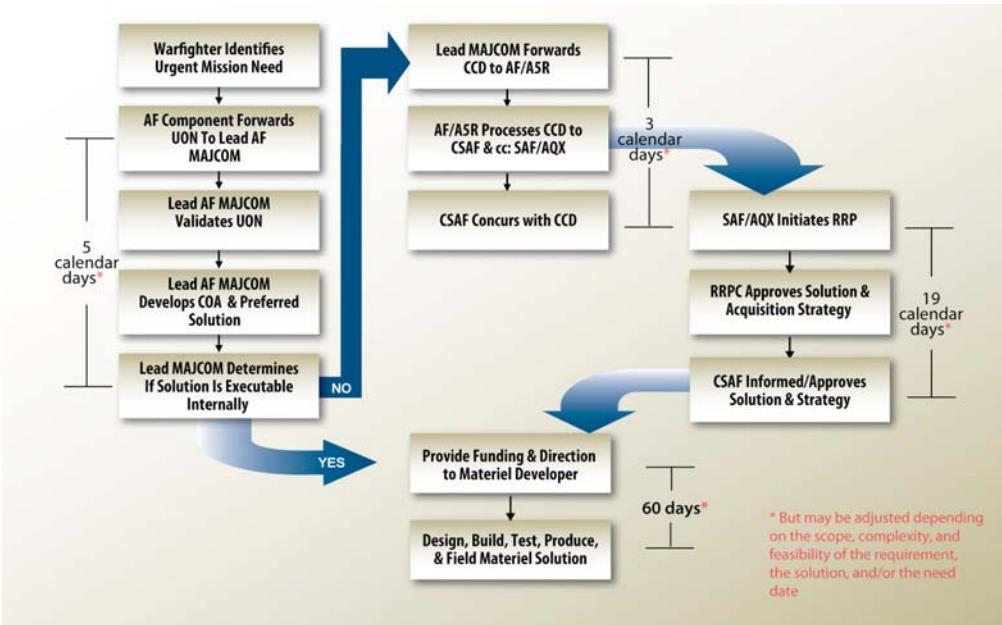


Figure B-7. Process used by the U.S. Air Force to review, validate, and assign resources to urgent operational needs. Presented to the task force on February 12, 2009.

Terms of Reference



THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

DEC 17 2008

MEMORANDUM FOR THE CHAIRMAN, DEFENSE SCIENCE BOARD

SUBJECT: Terms of Reference – Defense Science Board (DSB) Task Force on the Fulfillment of Urgent Operational Needs

In accordance with section 801 of the National Defense Authorization Act for FY 2009 (P.L. 110-417), please conduct a study to assess the effectiveness of the processes used by the Department of Defense for the generation of urgent operational need requirements and the acquisition processes used to fulfill such requirements. The study will contain a description and evaluation of the following areas of interest:

- (1) The effectiveness of the procedures used to generate, validate, and fulfill warfighting requirements through the urgent operational need and joint urgent operational need processes, to include:
 - (A) The extent to which joint and urgent operational need statements are used to document required capability gaps or are used to request specific acquisition outcomes, such as specific systems or equipment;
 - (B) The effectiveness of the processes used by each of the Military Departments and the various elements of the Department of Defense to prioritize and fulfill joint and urgent operational needs, including the rapid acquisition processes of the Military Departments, as well as the Joint Improvised Explosive Device Defeat Organization and the Joint Rapid Acquisition Cell; and
 - (C) The timeliness and responsiveness of the processes used by the Military Departments and the various elements of the Department of Defense to review and validate urgent operational needs statements and joint urgent operational needs statements.
- (2) The extent to which joint urgent operational need statements are used to avoid using Service-specific urgent operational need and acquisition processes or to document non-urgent capability gaps.



- (3) The extent to which joint acquisition entities maintain oversight, once a Military Department or Defense Agency has been designated as responsible for execution and fielding of a capability in response to a joint urgent operational need statement, including oversight of:
 - (A) The responsiveness of the Military Department or agency in execution;
 - (B) The field performance of the capability delivered in response to the joint urgent operational need statement; and
 - (C) The concurrent development of a long-term acquisition and sustainment strategy.

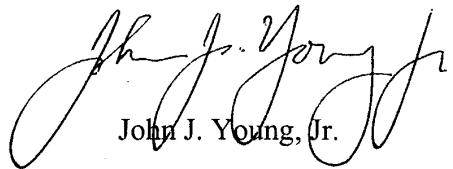
The Task Force will also make recommendations that address:

- (1) Best practices and process improvements to ensure that urgent operational needs statements and joint urgent operational needs statements are presented to appropriate authorities for review and validation not later than 60 days after the documents are submitted;
- (2) Common definitions and standards for urgent operational needs statements and joint urgent operational need statements;
- (3) Best practices and process improvements for the creation, evaluation, prioritization, and fulfillment of urgent operational need statements and joint urgent operational need statements; and
- (4) The extent to which rapid acquisition processes should be consolidated or expanded.

This Task Force shall have access to all levels of classified information needed to develop its assessment and recommendations. A final report shall be submitted to the Congress not later than July 11, 2009.

The Study will be sponsored by me as the Under Secretary of Defense for Acquisition, Technology and Logistics, the Vice Chairman of the Joint Chiefs of Staff, the Under Secretary of Defense (Comptroller), and the Director, Defense Research and Engineering. Dr Jacques Gansler will serve as the Task Force Chairman, and Mr. William Beasley, DDR&E, will serve as the Executive Secretary. Lieutenant Colonel Chad Lominac, USAF, will serve as the DSB Military Assistant.

The Task Force will operate in accordance with the provisions of P.L. 92-463, the “Federal Advisory Committee Act,” and DoD Directive 5105.4, the “DoD Federal Advisory Committee Management program.” It is not anticipated that this Task Force will need to go into any “particular matters” within the meaning of title 18, United States Code, section 208, nor will it cause any member to be placed in the position of action as a procurement official.



A handwritten signature in black ink, appearing to read "John J. Young, Jr." Below the signature, the name is written in a smaller, printed font.

John J. Young, Jr.

Task Force Membership

Name	Affiliation
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CHAIR

HON Jacques Gansler	University of Maryland
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MEMBERS

LTG William Campbell (USA, ret)	BAE Systems
Mr Richard Dunn	Private Consultant
Ms Christine Fisher	Private Consultant
Ms Kathleen Harger	Private Consultant
Dr William Howard	Private Consultant
LtGen Jan Huly (USMC, ret)	EOD Technology, Inc.
HON Noel Longuemare	Private Consultant
Dr Michael McGrath	ANSER
RADM David Oliver (USN, ret)	EADS North America
Ms Leigh Warner	Private Consultant
HON Dov Zakheim	Booz Allen Hamilton

GOVERNMENT ADVISORS

Mr Kevin Arnwine	Office of the Under Secretary of Defense (Comptroller) for Investment
Mr Tom Dee	Joint Rapid Acquisition Cell
CAPT Michael Ford	Joint Capability Development Directorate
Mr Brian Kiviat	Office of the Deputy Assistant Secretary of the Navy for Expeditionary Warfare
CDR Mike Moore	Joint Capability Development Directorate
Mr Thomas Simoes	Office of the Under Secretary of Defense (Comptroller) for Investment

EXECUTIVE SECRETARY

Mr William Beasley	Joint Rapid Acquisition Cell
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DSB REPRESENTATIVE

Lt Col Chad Lominac, USAF	Defense Science Board
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STAFF

Ms Kelly Frere	Strategic Analysis, Inc
Mr Brian C Keller	Private Consultant
Dr Toni Marechaux	Strategic Analysis, Inc

Presentations to the Task Force

Name	Topic
FEBRUARY 12–13, 2009	
<p>LTG Richard Zahner, Director, ISR Task Force Dr Robin Keesee, Vice Director of the Joint IED Defeat Organization (JIEDDO)</p> <p>Mr. William Beasley, Director (Acting) Joint Rapid Acquisition Cell (JRAC)</p> <p>Ms. Barbara Sisson, Director, Resources and Analysis, USCENTCOM J8</p> <p>BG Glenn Walters, Deputy Director for Resources and Acquisition, Joint Staff J8</p>	Resolving Joint Urgent Operations Needs/Immediate Warfighter Needs: What is the Joint Perspective?
<p>COL Steven Sliwa, Division Chief, Current and Future Warfighter Capabilities, Integration Prioritization and Analysis Directorate, G-3/5/7, US Army</p> <p>Brigadier General Andrew O'Donnell, Director, Capabilities Development Directorate, USMC</p> <p>RDMIL Dan Cloyd, Associate Director, Assessments Division, Chief of Naval Operations, US Navy</p> <p>Mr. Blaise Durante, Deputy Assistant Secretary for Acquisition Integration, US Air Force</p>	Resolving Service and Joint Urgent Operational Needs: What are the Service Perspectives?
<p>Mr. Terry Mitchell, Integration and Synchronization Office, G-2, Human Terrain Teams, US Army</p> <p>Mr. Mike Van Rassen, Program Manager, Counter-Rocket, Artillery, and Mortar (C-RAM)</p> <p>Col Perry Smith, Counter Remote-Radio Controlled Electronic Warfare (CREW), US Army</p> <p>CAPT Mark Kavenaugh, PMS-408, CREW, US Navy</p> <p>Col Ted Jennings, Program Manager, Biometrics, US Army</p> <p>Col Linda Herbert, Program Manager, Night Vision/Reconnaissance, Surveillance, and Target Acquisition, US Army</p>	Meeting Immediate Warfighter Needs, Program Manager Perspective: Are we getting capability to the warfighter in a timely manner?

Mr. William Beasley, Director (Acting) Joint Rapid Acquisition Cell (JRAC)	Lean Six Sigma Cross Functional Team on Urgent Needs/Rapid Acquisition - Study Results
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FEBRUARY 24–25, 2009

Mr. Steve Daly and Dr Vic Ramdass, U.S. Army	Army Test and Evaluation Command
Mr. Skip Hawthorne, Office of Defense Procurement and Acquisition Policy	5000 Series Overview
Mr. J.M. "Raleigh" Durham Director, Joint Advanced Concepts	Time-Defined Acquisition
Mr. Brad Berkson Director, Defense Program Analysis and Evaluation	Planning & Programming for Urgent Needs
Dr. Bruce Jette, President, Synovision (former Director, US Army Rapid Equipping Force)	Rapid Acquisition of Urgent Needs
Maj Gen Michael Basla JCS J6, VJ6	Net-Centric Functional Capability Board
Mr. Ben Riley Director, Rapid Reaction Technology Office	Rapid Reaction Technology Office
RADM Archer M. Macy JCS J8 Joint Integrated Air and Missile Defense Organization	Force Protection, Functional Capability Board
Col Michael Garrett, Senior Military Fellow, Center for a New American Security	Urgent Operational Needs: A Warfighter's Perspective

MARCH 5–6, 2009

Ms. Teresa Smith, Northrop Grumman Mr Bruce Jette, Synovision	Army Science Board Innovation Task Force Study
Mr. Roberto Rodriguez, OUSD(C) (Investment) CAPT Douglas Borreback, Comptroller, JIEDDO	
CDR Phil Walker, Joint Staff Program & Budget Analysis Division (Resources) Ms. Judy Guenther, Army Budget Office (Investment)	Financial Panel on Funding Urgent Needs
Mr. Ed Harrington, Deputy Assistant Secretary of the Army for Procurement	Procurement Challenges in Resolving Urgent Needs
CAPT Mike Ford, US Navy, Joint Staff J8 (Requirements)	Joint Staff Metrics for Urgent Needs
Mr. Alan Shaffer, Principal Deputy, DDR&E and Ms Edie Williams, DDR&E	Various Topics: The MRAP Task Force, the 253 Report and the S&T Budget

Col Kevin Peterson, Program Manager, US Army Mr Paul Mann, Program Manager USMC	MRAP Program Successes and Challenges
Mr. Dyke Weatherington, Deputy Director, Unmanned Warfare, USD (AT&L)	Unmanned Aerial Systems - Fulfilling an Urgent Need

MARCH 26–27, 2009

Gen. Montgomery Meigs, former Commanding General of U.S. Army Europe and former JIEDDO Director	Fulfilling Urgent Warfighter Needs
Mr. Tim Freihofer, Director	The Joint Contingency Acquisition Support Office
Mr. Shay Assad, Director of the Defense Procurement Acquisition Policy and Strategic Sourcing	FAR Part 18 and other Rapid Acquisition Authorities
Col. Robert Hoffmann, Commander, 645 Aeronautical Systems Group	Wide Area Aerial Surveillance Program and the Air Force's Safari Program
Dr Nancy L. Spruill, Director, Acquisition Resources & Analysis	Defense Procurement
Maj Gen (R) Claude Bolton, USAF, Former Assistant Secretary of the Army	Insights on Fulfilling Urgent Needs
LTG Stephen Speakes Army Deputy Chief of Staff, G-8	Fulfilling Army Urgent Needs
Ms Latisha Rourke, Director Electronic Warfare Programs and Sensors, Lockheed Martin	The Symphony System—Fulfilling an Urgent Operational Need

APRIL 7–8, 2009

Mr. Eddie Bair, Former Program Executive Officer, US Army Communications and Electronics	Meeting Urgent Needs
Brig Gen Michael Brogan, Commander, Marine Corps Systems Command	USMC Efforts to Fulfill Urgent Needs
Mr. Tony Lisuzzo, Army Materiel Command, Intelligence and Information Warfare Directorate	Fulfilling Urgent Intelligence, Surveillance, and Reconnaissance Needs
Dr Paul Kaminski	Perspectives on the Rapid Reaction Technology Office
RDML David Dunaway, Commander, Operational Testing and Evaluation Force	Navy Operational Test and Evaluation

APRIL 22, 2009

Mr. Alexander Lovett, Assistant Deputy Under Secretary of Defense Director, JCTD Programs (Acting)	On Advanced Concept Technology Demonstrations and Joint Concept Technology Demonstrations
Ms. Edie Williams and Mr. Mo Schriber	2007 NDAA, Section 253 requirement to “assess the feasibility of consolidating various technology transition programs into a unified effort managed by a senior DOD official”

MAY 27–28, 2009

Mr. William M. Shepherd, Senior Advisor S&T/Director S&T, USSOCOM	US Special Forces Command Science and Technology Efforts in Meeting Warfighter Needs
Mr. John Young, Former Under Secretary of Defense for Acquisition, Technology, and Logistics	Perspectives on Fulfilling Urgent Operational Needs
Brig Gen Mark O. Schissler, Director of Cyber Operations, US Air Force	The USAF's Cyber Command
LTG Thomas Metz, Director JIEDDO LTG Steve Boutelle (ret.), Former Army Chief Information Officer	Panel discussion on Meeting Warfighter Requirements

Glossary

3 Kings	Army Lieutenant General from G3/5/7, G8, and ASA (ALT)
3WM	Army Colonel from G3/5/7, G8, and ASA (ALT)
ACOM	Army Command
AF	Air Force
AF/A5R	Air Force, Director, Operational Capability Requirements
AMC	Army Material Command
AR2B	Army Requirements and Resourcing Board
ARCENT	U.S. Army Component U.S. Central Command
ARFOR	Army Forces
ARSTAF	Army Staff
ASA (ALT)	Assistant Secretary of the Army Acquisition, Logistics, and Technology
ASCC	Army Service Component Command
ATEC	Army Test and Evaluation Command
AWG	Asymmetric Warfare Group
BETSS-C	Base Expeditionary Targeting and Surveillance System-Combined
BTF	Biometrics Task Force
CAD	Capabilities and Acquisition Division
CC	United States Central Command
CCD	Combat Capability Document
CCIF	Combatant Commander Initiative Fund
CDD	Capabilities Development Directorate
CDIB	Combat Development Integration Board
CDRT	capabilities development for rapid transition
CENTCOM	United Stated Central Command

CERP	Commanders' Emergency Response Program
CFSOCC	Combined Forces Special Operations Component Command
CJCSI	Chairman of the Joint Chiefs Of Staff Instruction
CJTF	Combined Joint Task Force
CMNS	combat-mission need statement
COA	Course of Action
CoC	Council of Colonels
COCOM	combatant command
COMARFOR	Commander Marine Corps Forces
CONOPs	concept of operations
CoS	Chief of Staff
COTS	commercial off the shelf
C-RAM	Counter Rocket, Artillery, and Mortar
CREW	Counter Remote Control Improvised Explosive Device Electronic Warfare
CSAF	Chief of Staff of the Air Force
CWID	Coalition Warrior Interoperability Demonstration
DAMO-CIC	Office of the Assistant Deputy Chief of Staff G3/5/7, Future Warfighting Capabilities Division
DARPA	Defense Advanced Research Projects Agency
DAS	Defense Acquisition System
DC CD&I	Deputy Commandant Combat Development and Integration
DDR&E	Director, Defense Research and Engineering
DDRA	Deputy Director Resources and Acquisition
DepSecDef	Deputy Secretary of Defense
DM	Decision Memorandum
DOD	Department of Defense
DOTMLPF	doctrine, organization, training, materiel, leadership and education, personnel, and facilities

DRU	Direct Reporting Unit
DSB	Defense Science Board
DUR	directed urgent requirement
ECOP	equipment common operating picture
FCBs	Functional Capability Boards
FD	Force Development
FORSCOM	United States Army Forces Command
GOSC	General Officer Steering Committee
GOTS	government off the shelf
HMMWV	high mobility multipurpose wheeled vehicle
HQDA	Headquarters, Department of the Army
HQE	highly qualified expert
HTS	Human Terrain System
IED	improvised explosive device
IOC	initial operating capability
IPA	Intergovernmental Personnel Act
IPL	integrated priority list
IPT	Integrated Product Team
ISR	intelligence, surveillance, and reconnaissance
IT	information technology
IWN	immediate warfighter need
J8	Force Structure, Resources and Assessment Directorate
JCAAMP	Joint IED Defeat Capability and Acquisition Management Process
JCIDS	Joint Capabilities Integration and Development System
JCS	Joint Chiefs of Staff
JCTD	Joint Capability Technology Demonstration
JIEDDO	Joint Improvised Explosive Device (IED) Defeat Organization

JPEO Chem-Bio	Joint Program Executive Office for Chemical and Biological Defense
J2RAB	JIEDDO Joint Urgent Operational Needs Review Board
JRAC	Joint Rapid Acquisition Cell
JROC	Joint Requirements Oversight Council
JS	Joint Staff
JUONS	joint urgent operational need statement
MAJCOM	Major Command
MARCENT	U.S. Marine Corps Component U.S. Central Command
MNC-I	Multi-National Corps - Iraq
MOSA	modular open systems architecture
MRAP	Mine Resistant Ambush Protected (vehicle)
MROC	Marine Requirements Oversight Council
NDAA	National Defense Authorization Act
NDI	nondevelopmental item
NGB	National Guard Bureau
O&M	operations and maintenance
OCAR	Office of the Chief Army Reserve
ODIN	observe, detect, identify, neutralize
ONS	operational need statement
ORSA	operations research and systems analysis
OSD	Office of the Secretary of Defense
PA&E	program analysis and evaluation
PMF	presidential management fellow
PPBE	planning, programming, budgeting, and execution
QRF	Quick Reaction Fund
RAFA	Rapid Acquisition and Fielding Agency
RAT	Rapid Acquisition Teams

RDC	Rapid Deployment Capability
RDD	Rapid Development and Deployment
REF	Rapid Equipping Force
RFI	Rapid Fielding Initiative
RRF	Rapid Reaction Fund
RRP	Rapid Response Process
RRPC	Rapid Response Process Council
RRTO	Rapid Reaction Technology Office
S&T	science and technology
SBIR	small business innovative research
SOF	special operations forces
SOFCIDS-U	special operations forces capabilities and development system-urgent
SRSG	Senior Resource Steering Group
TF	task force
TRL	technology readiness level
UONS	urgent operational need statement
USAF	United States Air Force
USAREUR	United States Army Europe
USARPAC	United States Army Pacific
USASOC	United States Army Special Operations Command
USCENTCOM	United States Central Command
USD	Under Secretary of Defense
USD (AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics
USMC	United States Marine Corps
USSOCOM	U.S. Special Operations Command
UUNS	urgent universal need statement
VCJCS	Vice Chairman, Joint Chiefs of Staff